

# Easy Music Theory

WITH GARY EWER

**workbook**

lessons  
worksheets  
quizzes

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# lessons

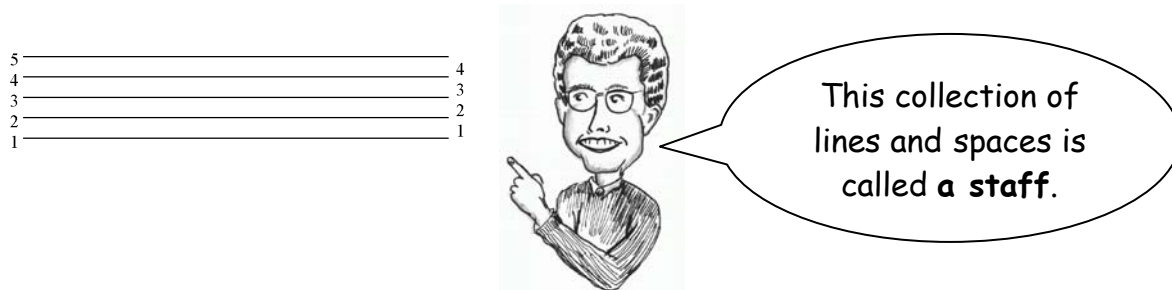
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# lesson 1

## music on the staff



Music in our Western culture is written on five lines and four spaces.



We can refer to each line and each space by its number. In the graphic above, the lines are numbered on the left, and the spaces are numbered on the right. A staff doesn't usually have numbers written beside the lines and spaces. We've put them there to show the fact that we number them from the bottom. On the staff we place notes and rests. (You'll find out more about notes and rests in later lessons.)

So if we place a note on the 5<sup>th</sup> line of the staff, where is the note? Right! On the top line.

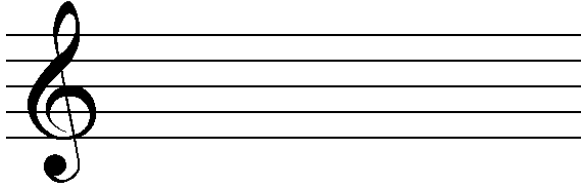
Of course, placing notes on lines and spaces doesn't mean a thing unless we know which notes the lines and spaces refer to. At the beginning of each staff we place an object called a **clef**. A clef tells us which notes are which on the staff.

The two most common clefs are the **treble clef**:  and the **bass clef**: 

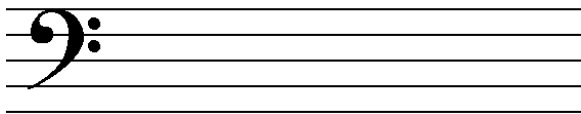
# the grand staff

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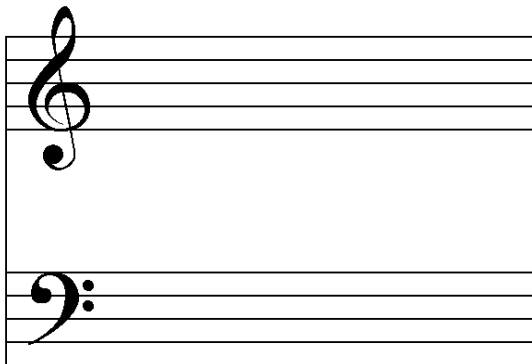
Here is a treble clef on a staff:



And here is a bass clef on a staff:

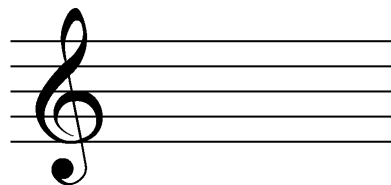


A treble clef line and a bass clef line joined together form what is called a **grand staff**:



Look familiar? You'll find this in any book of piano music. Most piano music is written on a grand staff.

In upcoming lessons, we're going to see how the clefs are used, and why we combine staves into a grand staff. In this lesson, we'll learn how to draw the clefs on the staff. Take a close look at the treble clef:



# the grand staff

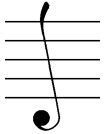
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Let's learn how to draw it:

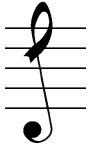
i) Start with the dot at the bottom, and begin to draw the line upward:



ii) Continue upward until you pass the top line of the staff by a short distance:



iii) Swoop to the right and head downward, crossing the first line you drew at the **4th** staff line:



iv) Continue the line downward, slowly curving to the right, so that it eventually "sits" on the bottom line:



v) Finish your treble clef with a curl that brushes the 3rd line, and then crosses the 2nd line:



Try drawing some treble clefs on a piece of staff paper right now.

# the grand staff

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The bass clef is quite a bit easier to draw:



i) Start by drawing a dot on the 4th line, then swoop upward and toward the right, brushing the top line:



ii) Continue downward and to the left until you just graze the 2nd line:



iii) Place two dots that straddle the 4th line, fairly close to the clef:



These clefs are computer-generated perfection. The ones you draw may look more like this one:



Practice drawing clefs. Draw lots of them. You'll find that after drawing a couple of rows of clefs, you'll become pretty good and quick at it.

# glossary

**Allegro:** Quickly; lively.

**Ritardando:** Slow down.

**Molto:** Very much; a lot.

**Agitato:** Excitedly; with agitation.

# s u m m a r y

In this lesson, you learned about the musical staff – how music in our culture is written on five lines and four spaces. We can refer to each line and space by a number. On the staff, line 1 is the bottom line, and space 1 is between the first and second lines.

You also learned about clefs. Clefs are figures that we place at the beginning of staves that help us identify note names. (Notes are covered in the next lesson.) We know that there are two common clefs: the treble clef and the bass clef.

And most important: learning new concepts requires *practice*. So practice, practice, practice! Every lesson in Easy Music Theory has something to practice. For now, write lots and lots of clefs!



## FAQ

### 1. Is it possible to have music written on more or less than five lines?

Yes, but the five line staff is considered to be the standard staff. There are examples, especially in more modern music, and in ancient music, where the staff has more or less than five lines, but this is not common today.

### 2. Does all music use a grand staff?

No. A grand staff is used for wide ranges of notes (this will become clearer in Lesson 2). Usually, instruments that play single notes at a time (like a recorder, trumpet, flute, voice, etc.) use one staff. Many instruments that can play several notes at once (like a piano or organ) usually use a grand staff.

### 3. Why does this lesson have a glossary section?

Composers use all kinds of written instructions in their music. In each lesson, we're going to learn many of these instructions, little by little. So, as you learn about music, you will know that when you see the word **Allegro** written at the start, it is an instruction to play the music **quickly** or **lively**.

### 4. What is the FAQ for?

FAQ stands for **Frequently Asked Questions**. We've tried to anticipate some of the more common questions many have as they learn new musical concepts. We hope the FAQ addresses these questions and problems encountered by students of music theory, as you proceed through each lesson.



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# lesson 2



This lesson involves a lot of note naming by writing the letter names underneath. Once you're done this lesson, try learning the pitches by pointing to each note and naming them, rather than writing the note names in your music. You'll find that you'll remember them quicker.

In the last lesson, you learned about the treble staff, the bass staff, and how they can combine to form a grand staff.

With that knowledge, we'll now learn three things:

1. How to write notes
2. How to place notes on a staff, and
3. How to name the notes.

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## writing notes

A note is an oval or egg-shaped object that represents a musical pitch. Here's a note:



That's the perfect, typeset version. A hand-drawn note will look more like this:

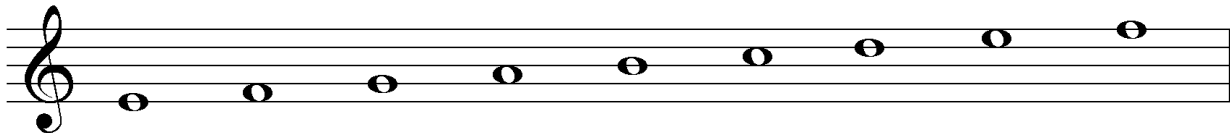


Notes "just sitting there" mean nothing. These notes  don't tell us anything musical.

To give notes meaning, we must place them on a staff, like this:



You'll recall from Lesson 1 that a musical staff consists of lines, spaces, and a clef—just as shown above. We can place notes on each line and space of the staff. Here's what notes look like on a treble clef staff:



**Did you know...** Some composers from the 20<sup>th</sup> century have experimented with new types of notation, called graphic notation. Graphic notation is a way for a composer to show, often through diagrams, lines, squiggles, and other symbols, the intention of the composer. In a way, it is reminiscent of *neumes* from 1,500 years ago.

## naming notes in the treble staff

Now that we've placed the notes, let's name them. We use the first seven letters of the alphabet, A to G, to name the notes. Notes are named according to where they're placed on the staff.

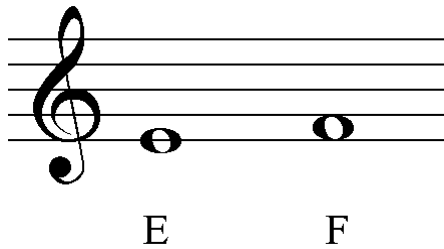
In the treble clef staff, the note on the bottom line is called E:



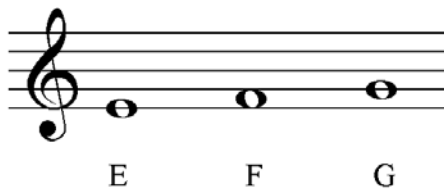
# notes

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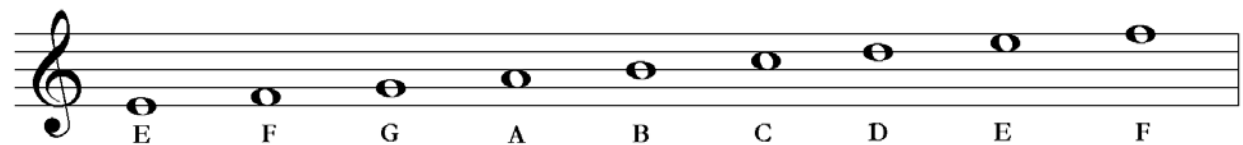
Now, since we use the first seven letters of the alphabet to name the notes, the note above E is F:



and it is placed on the space above the E line. The next note is G:

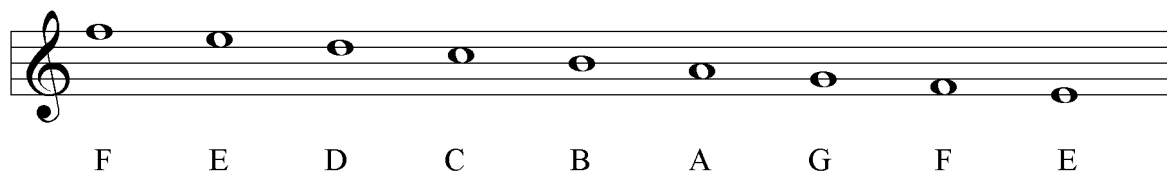


But once we reach letter G, we have to return again to letter A. And then we just simply continue onward. Here are the rest of the notes on the treble staff:



Notice that the note after G is A (there's no note H!). And notice how the notes repeat as you go up the staff, eventually reaching E again, and then F.

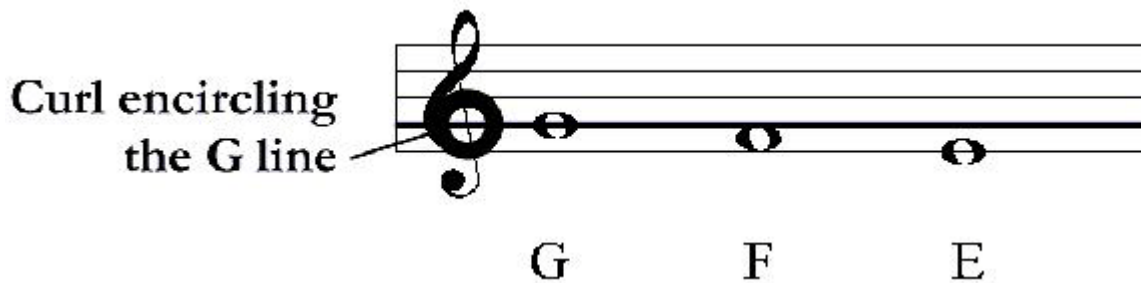
As we ascend, the letter names follow the pattern of the alphabet. As you might imagine, when a scale of notes descends (goes downward), the letters go in reverse:



So as notes go "lower," the letter names follow the pattern of the alphabet backwards. Once reaching the letter A, the pattern returns to letter G and continues on.

## how notes got their names

Why is the note on the bottom line of the treble staff an E? Here's why. The treble clef is also known as the G clef, because the curl in the clef actually encircles the line designated as the "G line," which is line two of the staff.

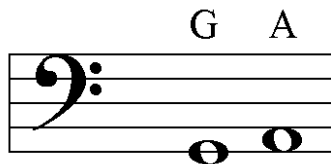


## naming notes in the bass staff

Naming notes in the bass staff is much like naming them in the treble, except that the bottom line note on the bass staff is G:



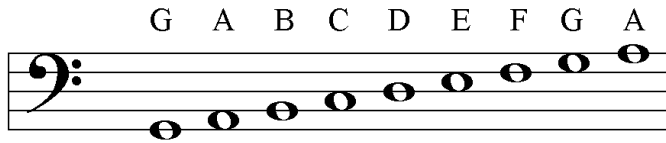
Going up the scale, our next note is A. Remember, we use only the first 7 letters of the alphabet:



### Did you know...

We use the first seven letters of the alphabet for note names. But in Germany, they use the first eight letters. Yes, there is an 'H' in German music! 'H' is the letter name used in place of 'B'.

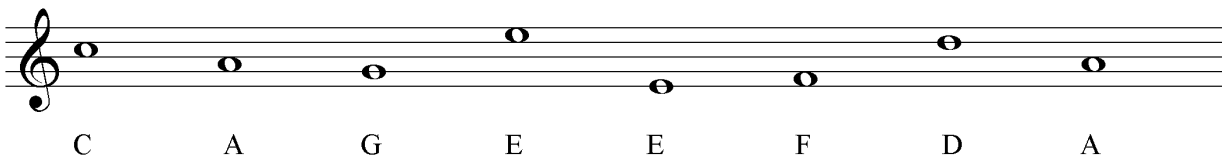
And so the series of notes continues upward, like this:



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## a note about notes

So far, we've been following ascending or descending patterns. But we can mix 'em up!



As you can see, notes don't *have* to go in order—that could get boring pretty quickly!

Another thing—I've shown the note names under each note. That's just for the purpose of learning the note names. Normally, music is shown without note names, like this:



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## more notes!

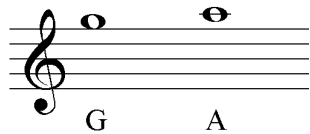
We've shown all the notes on the treble staff, and all the notes on the bass staff. Is this all the notes there are? No! There are many more notes than these ones. There are notes *higher* than the highest line of the treble clef, and there are notes *lower* than the lowest line of the bass clef.

How do we show all of these “extra” notes? By using **leger lines**.

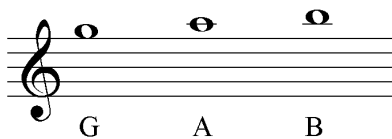
Suppose we wanted to show the note higher than this G on the top of the treble staff:



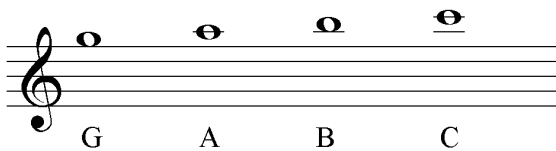
We can, through use of a leger line, like this:



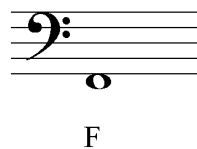
We can also write notes on top of leger lines. Let's add a B above A:



We can also combine leger lines to get even higher notes. Let's combine leger lines and draw the note C:



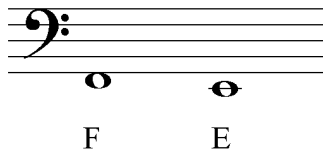
We can use leger lines to go beneath the bass clef staff as well. Here's an F on the bottom of the staff:



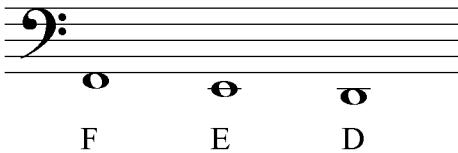
The line going through the new note is a **leger line**.

A leger line extends the staff, so that more notes can be added. The note above G, using a leger line, is A.

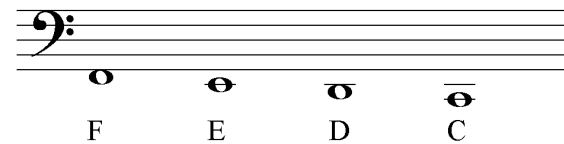
The note below F is E, which uses a single leger line:



We can write notes beneath leger lines. Here's D:



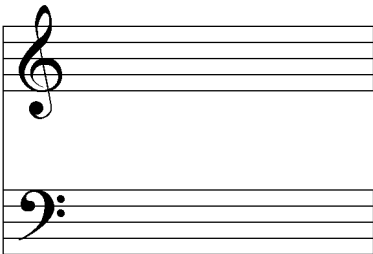
And we can combine leger lines. Here's C:



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## even more notes!

So far, we've used leger lines to extend the treble staff upward, and the bass staff downward. We can also use leger lines to go *above* the bass staff, and *below* the treble staff. Here's how. Here's our grand staff from Lesson 1:

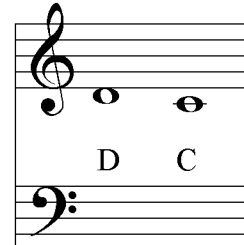


# notes

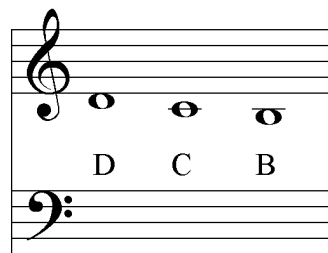
Let's place a D note at the bottom of the treble clef staff:



Using the same leger line method, we can add a leger line, and go lower, making the note C, like this:

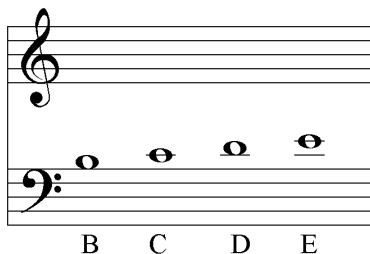


We can combine leger lines, and keep going lower.



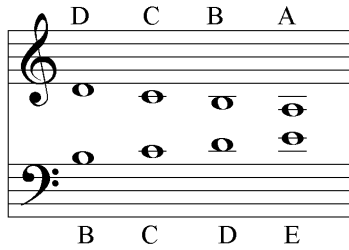
Eventually, though, we'll run into the bass staff—there's a practical limit to the number of notes you can squeeze in between the treble staff and bass staff!

We can do the same with the bass staff, too. The top note on the bass staff is B. We can use leger lines to get C, D, E, and so on. Again, there is a limit to the number of notes you can fit in, before you run into the treble staff. Here's what leger line notes look like at the top of the bass staff:



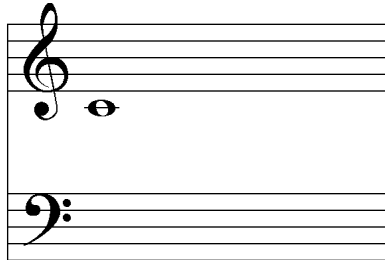
# notes

Here's something interesting. Let's look at the leger line notes of both clefs between the staves (that's the plural of staff):

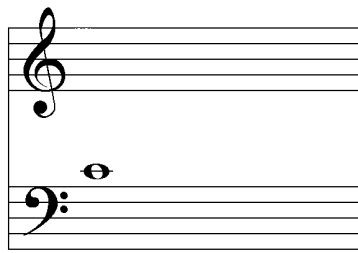


Look at the second note in the treble staff, and the second note in the bass staff. They're both C. The C shown in each clef is the *same* note, which is called **Middle C**.

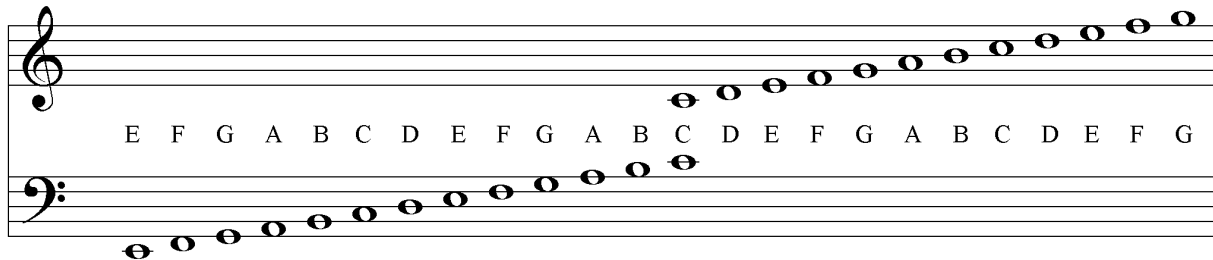
This is **Middle C**:



And *this* is **Middle C**:



That covers our look at leger lines. Now, here is a diagram of the grand staff with all of the notes labeled:



You now understand that leger lines will let you write even more notes than these. You can go as far below the bass staff, and as far above the treble staff as you want, just by using leger lines!

# glossary

**Tempo:** Speed of music.


**Moderato:** At a moderate tempo.

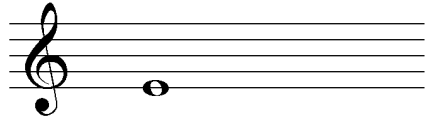
**Accelerando:** To gradually increase tempo; speed up.

**Dolce:** Sweetly.

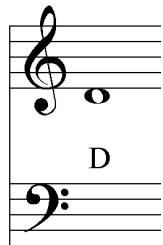
**Attacca:** To begin the next piece or movement immediately.

# summary

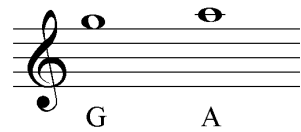
In this lesson, we learned that notes are oval or egg-shaped objects  that are placed on a staff.



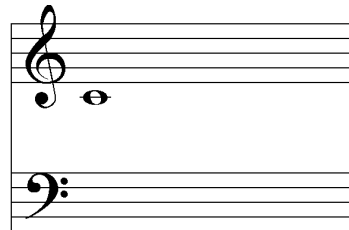
Notes are named according to where they are placed on the staff.



The staff can be extended upward or downward by using leger lines.



The C between the treble staff and bass staff is called Middle C.





# F A Q

## score formats

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**1. I've seen notes that are not just "egg shaped." For example, I've seen notes that are filled in with stems attached to them. What are those notes for?**

There are many different types of notes, and they generally indicate different durations. Notes that are held for shorter durations look different than notes that are held for longer durations. We'll be getting into this in later lessons. For now, we'll stick with the "goose-egg" notes.

**2. How many leger lines can be used for a single note?**

As many leger lines as it takes to make that note! However, keep in mind that if you use too many leger lines, you may have trouble reading the note. If you are writing a note in the bass clef that uses five leger lines above the staff, one of the things you can do is to switch from the bass clef to the treble clef.

**3. I understand the notes of the grand staff, but I have trouble recognizing them quickly. What do I do?**

If you play an instrument, try playing some music that you are not familiar with, several times a week. This will increase your ability to read quickly. Learning to read music is like learning to read words--it takes practice. When sight-reading, the point of the exercise is not to make the piece sound wonderful, but rather to simply play your way through the piece, increasing your ability to instantly recognize notes. If you try playing unfamiliar music every day for just 10 minutes per day, you'll notice a significant increase in your ability to sight-read after just a week, if not sooner. But you've got to stick with it! You can even take a piece of staff paper, write out random notes, then play them on your instrument.

# lesson 3

## Introduction to the keyboard

This lesson is about sharps, flats, and semitones, and how they appear on the piano keyboard.

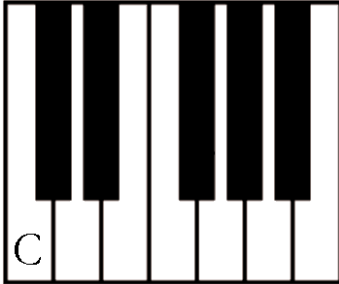
It's not necessary to know how to play the piano in order to understand music theory, but it is important to understand how a keyboard is laid out, because it will help you to visualize the concepts you're going to learn.

Here is part of a piano keyboard.



Notice that a piano keyboard is a collection of white and black keys. The white keys run continuously, while the black keys are grouped in pairs and in threes.

It is the black keys that help you understand "where you are" on a keyboard, since they are grouped together in twos and threes. We can use the black key pattern to locate the note C: it's the white note that is just to the left of each group of two black notes:



Here are three octaves of a piano keyboard with the white notes labeled:



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## middle C

Now, you've often heard that term **Middle C**. Where is it found? If you sit roughly at the middle of a piano and look down, you should be looking at **Middle C**. As you can see there are several C's as you glance up and down the piano keyboard. The one in the middle is called **Middle C**.

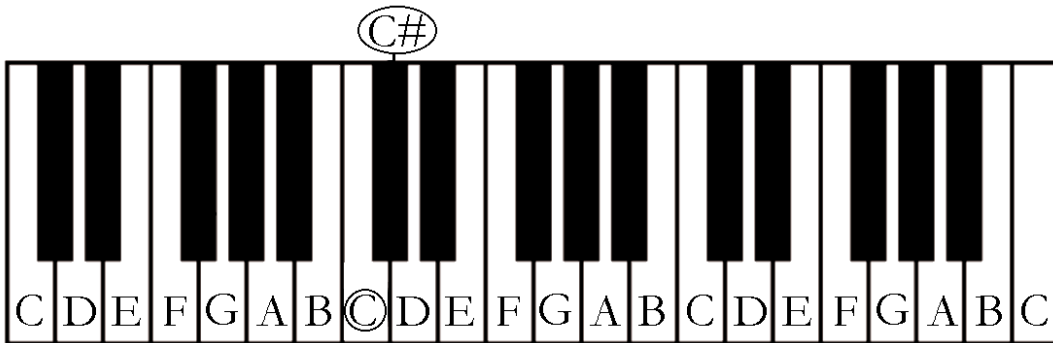
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## naming the black notes

In order to name the black notes, we must first understand what semitones, sharps, and flats are.

In our Western culture, the shortest distance, or **interval** between two notes is called a **semitone**. Looking at a piano keyboard, you will see that the shortest distance above the note C is a black note called C-sharp. The symbol used to designate “sharp” is “#”:

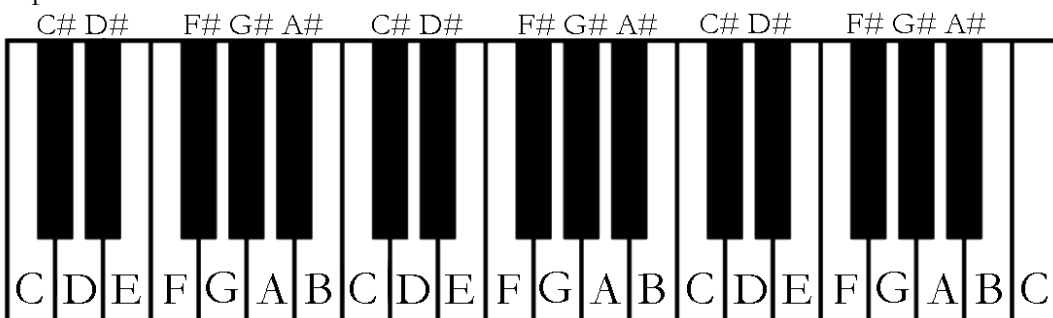
# keyboard



Locate the note D. The shortest distance or interval above the note D is a black note called D#:



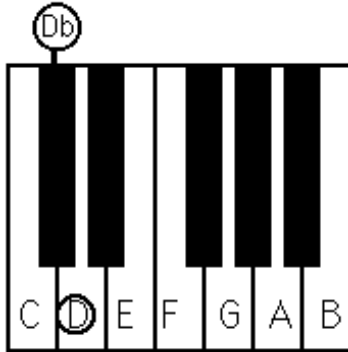
Because there is no note between them, the distance between B and C is one semitone. And you can find F# above F, G# above G, and A# above A. Here's a keyboard with the black notes labeled using sharps:



It stands to reason that you can sharpen a black note too. For example, a semitone above F# is G. A semitone above A# is B.

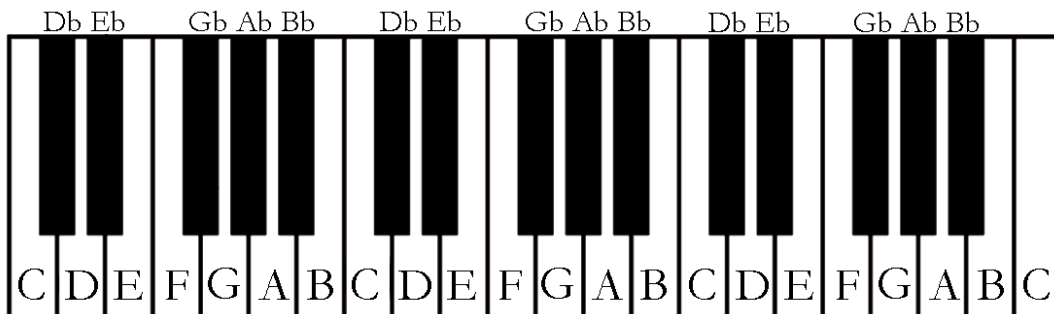
# keyboard

Here's another way of looking at the black notes. Look at the note D. The name of the note a semitone lower than D is D-flat, or just Db. (The symbol used to designate "flat" is "b", or "b".)



Did you notice that the black note, Db is the *same* black note as C#? As you can see, each black note has two possible names, one sharp, and one flat. So, the note *below* E is Eb, and the note *above* D is D#. Eb and D# are the same note.

Here's the keyboard again, showing the black notes named as flats:

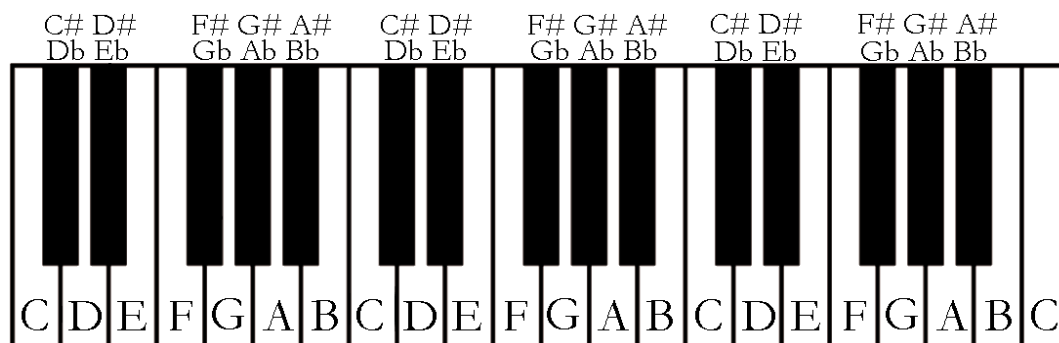


Again, it stands to reason that you can flatten a black note. For example, a semitone below Gb is F. A semitone below Db is C.

# keyboard

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Here's another figure, showing that each black note has two possible names:



So what's another name for Gb? F#. What's another name for A#? Bb.

---

## wait, there's more

That's not all the semitones we have on the keyboard! Look at C again. Notice that the closest note lower than C is not a black note, but rather the white note B. The distance from C to B is an interval of a semitone. Can B also be called Cb (C-flat)? Sure. There are certain times when a B is called a Cb (though not often) – we'll show this in other lessons.

The same thing goes for F. The closest note lower than F is E, and there are times when E is called Fb (again, not often).

Sometimes we need to tell musicians that a note that *used* to be sharp or flat is no longer altered. To do so, we use a natural sign, which looks like this: ♮

Like a sharp or flat sign, a natural sign goes in front of a note head, and after a letter name. So E♮ means that the E is a "normal" E - not sharp and not flat.

As you can see, the keyboard is an excellent tool for visualizing sharps, flats, and semitones. But the same principles apply to any instruments – guitar, saxophone, recorder, whatever.

# g l o s s a r y

**Largo:** Slowly

**Forte:** Loudly

**Piano:** Softly

**Grandioso:** In a grand, elegant style

**Tacet:** Be silent

# s u m m a r y

In this lesson, we've learned that the piano keyboard is a series of white notes separated by groups of two and three black notes.



The smallest distance, or *interval* between two notes is called a *semitone*.

To sharpen a note, raise it a semitone. For example, the semitone above C is C#. The semitone above F# is G. The semitone above E is F.

To flatten a note, lower it a semitone. For example, the semitone below D is Db. The semitone below Ab is G. The semitone below C is B.



## F A Q

**1. You say that Db and C# are the same pitch. Does this hold true for other instruments, or does this apply only to the keyboard?**

Music theory applies to all instruments. This lesson uses the diagram of the keyboard because it is a very useful visual aid. But the concepts described in this course will apply equally well to all instruments.

**2. Can I use an electronic keyboard instead of a piano? Do those keyboards have the same layout?**

Yes. The piano keyboard layout is identical to synthesizers, organ, harpsichord, xylophone, vibes – any instrument that uses a similar white note/black note layout.

# lesson 4

In Lesson 3, we learned about sharps, flats, and semitones, and how they appear on the keyboard. In this lesson, we're going to learn about note **durations**—in other words, the *length* of notes.

## note durations

All musical notes are not held for the same length of time, or duration. If they were, that would be pretty boring music! Imagine any piece of music, and you'll realize that there are long notes, short notes, and notes in between.

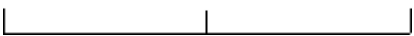
Composers need a way of showing performers *how long* to hold each note. By making each note look different, it's easy to show this.

Let's place a note on a line with brackets:

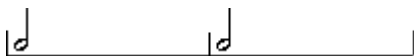


You've seen this note before; it was introduced in Lesson 2. This note is called a **whole note**. Notes are not usually found sitting on a line with brackets. It's being shown this way to give a visual idea about its duration, or how long it sounds. In this example, our **whole** note is taking up a **whole** bracket.

Let's divide this bracket up into two equal parts:



Now the whole note no longer fits. Whole notes need whole brackets. Now we need notes of shorter duration to fit. The notes that fit here look like whole notes with stems:



These notes are called **half notes**. You can tell from this diagram that it takes two half notes to make one whole note.

# note durations

On we go. If we divide the bracket into four equal parts, our half notes no longer fit. We need notes of shorter duration. These notes look like half notes that are filled in:



These notes are called **quarter notes**. You can tell from the diagram that it takes four quarter notes to make two half notes. Also, it takes four quarter notes to make one whole note.

We could go on doing this forever! Cut the bracket in half, make a note look different, cut a bracket in half, make a note look different... Let's just do one more. Let's take our bracket with quarter notes, and divide each note in half. That gives us room for eight notes instead of four. Now the quarter notes no longer fit, and we need a shorter note. They look like quarter notes with flags:



These notes are called **eighth notes**. You can tell from the diagram that it takes eight eighth notes to make four quarter notes. It takes eight eighth notes to equal one whole note, and so on.



Let's have a quick  
mini review.

Here are the notes we've been talking about:



...and here are all of the brackets placed together in a comparison chart:



# note durations

Now it's easy to see at a glance how different note durations compare. Notice that in the duration of one whole note, we can fit two halves, or we can fit four quarters, or eight eighths. And we can see that in the space of *one* half note, we can fit two quarter notes. In the space of one half note, we can fit four eighth notes.

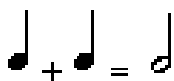


## DID YOU KNOW...

Specifying durations of notes began around the year 1200. At that time, music started to be composed for several parts, and so a way was needed to make sure all the performers could “stay together” when they played.

## musical mathematics

Did you know you can turn musical notes into math equations? It's easy, using our duration chart. Take a look at this:



This equation tells us that one quarter plus one quarter equals one half note. Is it true? Just look at the comparison chart above. Does a quarter plus a quarter equal a half note?



Yes! Musical math works! Two quarter notes equal a half note in duration. How about this one:



# note durations


---

Let's count it carefully. Look at the comparison chart, and you'll see that the space taken up by the half note, the eighth notes, and the quarter, equals the space of a whole note. Based on the chart, you might picture it this way:



You can see that this equation works.

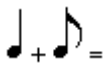
Let's assume that a quarter note has a value of 1. That means a whole note has a value of 4. A half note has a value of 2. And an eighth note has a value of  $\frac{1}{2}$ . With this in mind, our equation:

 is the same as:  $2 + \frac{1}{2} + \frac{1}{2} + 1 = 4$  Note durations are pretty simple math!

---

## dotted notes

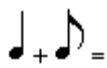
Now you know from the chart that two quarter notes equal one half note. But look at this equation:



Is there a *single* note that answers this equation? There is, and it requires learning about one more bit of notation: the **dotted note**. When you add a dot to a note, you increase the duration of a note by *half* of its value. You know that in many time signatures, a quarter note equals one beat. Adding a dot to this note...



...adds half of its value to the note. Half of 1 is  $\frac{1}{2}$ . So adding  $\frac{1}{2}$  to a quarter note gives you a note  $1\frac{1}{2}$  beats long.

Back to our equation  You can see from the comparison chart that the eighth note is half the value of a quarter note. A note plus half of its value is a **dotted** note. The answer to our equation is:



# note durations

---

Here is a dotted half note:



It's equal to a half note plus a quarter note, because half of a half note is a quarter note. Do you see this from the comparison chart? Sure!



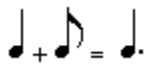
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Helpful hint: When a dotted note is on a line, the dot will go beside the note, but in the space ABOVE the line.

---

## ties

Here's another interesting bit of notation. We know that a dotted quarter is the same duration as a quarter note plus an eighth note. Here's that equation again:



In notation, we can also show a quarter plus an eighth this way:



This is another way of showing a duration of a quarter plus an eighth. Just draw both notes, then join them with a curved line, called a **tie**. The quarter **tied** to an eighth is the same duration as a dotted quarter. The two tied notes are played as one long note. In written music, there are times when it is correct to use a dotted note, and other times when it is correct to use a slur. That's for another lesson. For now, here's an example of a bit of music notation that uses a tie:



---

Take frequent breaks when studying music theory. Short breaks will help you stay focused.

---

# glossary

**Mezzo:** Medium.

**Stringendo:** To gradually gain energy by increasing tempo.

**Crescendo:** To gradually get louder.

**Diminuendo:** To gradually get softer.

**Cantabile:** In a singing style.

## s u m m a r y

We now know that there are notes of different durations. Any song you can think of uses notes of different durations.

Different durations are shown by using notes that look different. We learned about four different note durations: the whole note, the half note, the quarter note, and the eighth note.

We learned that a whole note has the same duration as two half notes, which is equal to four quarter notes, and eight eighth notes, and so on.

Also, we learned that adding a dot to a note increases its value by *half* of its original value. A dotted quarter is the same duration as a quarter note plus an eighth note.

And finally, we learned that a **tie** joins two notes together so that they are played as one long note.



## F A Q

### 1. Are there more notes in addition to whole, half, quarter, and eighth notes?

Yes. There are notes that last *longer* than a whole note, and there are notes that last *shorter* than an eighth. You'll learn about a shorter note in the next lesson.

### 2. You say that notes don't really sit in brackets. What do they sit in?

As you know, notes sit on a staff made up of lines and spaces (Lesson 1). In Lesson 6, you'll find out that notes sit in measures or bars. Wait for it!

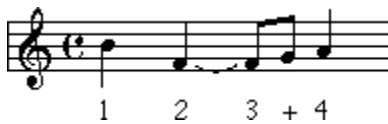
### 3. Do we ever use a tie with rests?

No, tied rests are never necessary, because several rests side-by-side already sound like one long rest, and don't need a tie. We do occasionally see dotted rests, however.

# lesson 5

In Lesson 4, you discovered that there are different notes for different durations. You learned about the relationships between the notes. For example, you now know that two half notes equals a whole, and four eighth notes equals two quarter notes. You also learned that adding a dot to a note increases its duration by half of its value.

You also learned about the **tie**, which is a curved line, or **slur** that joins two notes together. In the following example, the quarter note tied to the eighth note is the same as if the quarter note had a dot after it, and the eighth note wasn't there at all:



In the example above, we called the note above the number 3 an **eighth note**. We know that an eighth note has a sloping flag, not a straight one. We'll explain more about that in this lesson.

## note flags

Adding a flag to a note makes the note duration half as long. Take a quarter note that lasts for one beat:



Add a flag to it, and it lasts for half of a beat:



What is this note? That's right, an **eighth note**. Can we add a flag to an eighth note? Sure. It looks like this:



# note durations 2

---

This is called a **sixteenth note**. It takes two sixteenth notes to equal one eighth note. Recalling the comparison chart from Lesson 4, imagine a row of sixteen sixteenth notes under the eighths. This is shown in the video for Lesson 5, too. According to the chart, it takes two sixteenth notes to equal one eighth note. It takes four sixteenth notes to equal one quarter note. How many for a half note? Eight. How many for a whole note? Sixteen!



Here's a mini review  
of all the notes you  
now know.

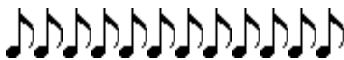


Like to guess what a note with three flags would be called? Yes, a thirty-second note. Four flags? A sixty-fourth.

---

## note beams

Notice how a row of flagged notes can tend to look a little cluttered? And it's sometimes hard to tell at a glance just how many there are, too.





Often, when flagged notes of the same duration are placed side by side, it's easier to read them if you turn the flags into **beams**. So, instead of this...



...just remove the flags and replace them with beams, like this:





 is musically the same as 

# note durations 2

---

Same thing for sixteenths:

 is musically the same as 

Why use beams instead of flags?  
It's tidier, and easier for the performer to read.

---

## note stem direction

Sometimes note stems point up, and sometimes they point down. Look at this example:



How are the note stem directions decided? Simple. A note below the middle line points its stem up. A note above the middle line points its stem down. For notes *on* the middle line, take your choice (most composers choose stem up).

---

### Did you know...



Leopold Mozart (Wolfgang's father) was the first composer to use a double dot. As you know, the dot adds half of the value of the note to which it is attached to the length of a note. The second dot adds half the value of the first dot! Do in 4/4 time, a quarter note with two dots means:  $1 + \frac{1}{2} + \frac{1}{4}$ .

# note durations 2

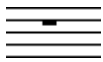
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## rests

If notes were all there were to music, the sound would never stop. One note would lead to another, then another, then another. What if we want a silence in a piece of music? That silence is represented by a **rest**. For every note that produces sound, we have a corresponding **rest** that produces silence.

Just as a note represents a certain duration in sound, a rest represents a certain duration in silence. We use a note for sound, and we use a rest for silence.

Just as we have a whole note that gets four beats of sound, we have **whole rests** that get four beats of **silence**. A whole rest looks like a small rectangle that hangs from the fourth line of the staff, like this:



A **half rest** gets two beats, like the half note. A half rest is a small rectangle that sits on the third line, like this:



A **quarter rest** gets one beat, just like the quarter note. To draw a quarter rest, start with a sloping diagonal line from the fourth to the third line, then draw a small semicircle around the third line, and finish with a larger circle beneath it. Here's what a printed quarter rest looks like:



You may find it a bit difficult copying that one, so here's what a hand drawn one looks like:



There are variations on how a hand drawn quarter rest looks like, but the one shown will do nicely.

# glossary

**Allegretto:** Quickly, but not as quickly as **allegro**.

**Rubato:** “Robbed time”; to play with a very free tempo.

**Pesante:** Heavy, each note with length and emphasis.

**Sordino:** Mute.

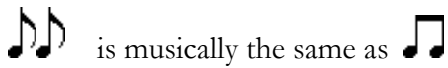
**Senza:** “Without”, as in “senza sordino” (without mute).

# s u m m a r y

In this lesson, we learned that we can add a flag to an eighth note to produce a sixteenth note, and that each time we add a flag to a note, we cut its value in half. Here are the notes we've learned about:



We also learned that notes that are **beamed** together are the same as notes with flags.



We learned that notes above the bottom line point their stems upward, and notes below the bottom line point their stems downward. Notes on the middle line of a staff can point either way.

And we learned that we can use **rests** in music to represent silence. For each note value there is a corresponding rest of the same value.



# F A Q

### 1. Are there more notes in addition to whole, half, quarter, eighth, and sixteenth notes?

Yes. There are notes that last *longer* than a whole note, and there are notes that last *shorter* than a sixteenth. For example, a *thirty-second note* is shorter than a sixteenth.

### 2. Can notes of different duration be beamed together?

Yes. For example, it is possible to beam an eighth note to a pair of sixteenths. It looks like this:



Musicians find it easier to read than:



### 3. Can we use dotted *rests*?

Yes, there are dotted rests, and of course the way to calculate the length of the rest is the same as for notes. There are some rules that editors usually employ regarding when dotted rests are used, and when they aren't. And dotted rests are used more commonly today than, say, fifty years ago.



# lesson 6

In Lesson 5, you learned all about rests. You learned that every note has a corresponding rest. You've now learned about many elements of music notation. You know about the staff, clefs, notes, flags, beams, and so on. You can see many of these elements in this example:



Some things in this example look familiar, but perhaps there are a couple of things you've never seen before. How about those numbers near the start of the music? And what about the vertical lines you see every so often?

## measures

Let's deal with the vertical lines first. Music is often divided into units called **measures**, or **bars**. ("Measures" and "bars" mean the same thing.) Each measure in a piece of music is indicated by a vertical line. So, looking at the example above, you'll see three quarter notes and then a vertical line. The vertical line is a bar line, and so we would say that the first measure has three quarter notes in it:



**Did you know...** Bar lines were first used in music during the Renaissance era, around the year 1500. The number of beats from one bar line to the next must correspond to the time signature. However, that wasn't always the case. During the Renaissance, composers often only used bar lines to separate one phrase from the next, or one section from the next.

## time signatures

Each measure of music has a certain number of beats. How many? That's determined by the **time signature**. (**Meter** is another term for time signature.) The time signature is the pair of numbers usually found at the beginning of a piece of music:



A time signature is made up of a top number and a bottom number. In most time signatures, the top number tells us how many beats there are in a measure. In our example, there are three beats in every bar. Now, what's the bottom number?

The bottom number indicates what kind of note gets the beat. You can think of the bottom number as a "code." Take a look at this chart:

Note	Bottom number code
♩	1
♪	2
♫	4
♮	8

So the "4" in  $\frac{3}{4}$  is the "code" for the quarter note (look at the chart). This means that the piece of music will have three quarter note beats in every measure.

# measures

Let's see if this is true. Here's our example:



$\frac{3}{4}$  means that there should be three quarter note beats in every bar, or measure. Look at the first bar. There are three quarter notes, and then a bar line. Yes, this measure has three quarter note beats.

Next bar, we see two beamed eighth notes--that equals one quarter note. Then comes another pair of beamed eighth notes--that's our second quarter note beat, and the third beat is a quarter notes--that's our third beat. Third measure, we have a half note--that's two quarter note beats, then two eighths, which make up our third beat. And the last measure is a dotted half note. A dotted half note is the same length as a half note plus a quarter note, and that equals three beats. Yes, this piece definitely has three quarter note beats per measure.



Here's a quick summary of the beats in the piece shown above.

Bar 1: 3 quarter notes = 3 beats

Bar 2: 4 eighth notes + 1 quarter note = 3 beats

Bar 3: 1 half note plus 2 eighth notes = 3 beats

Bar 4: 1 dotted half note = 3 beats

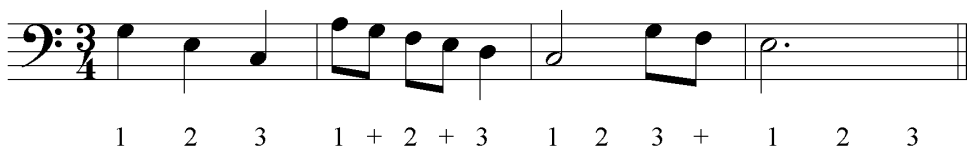
If you're having difficulty understanding how notes add up, just go back to Lessons 4 and 5 to refresh your memory!

## How notes are beamed

Take a look at bar two in our example below. Notice that the eighth notes have been beamed. In this example, we beam two eighth notes together (not all four) so that we can see that the **beat unit is the quarter note** (two eighth notes equals a quarter) In some music, you would find four eighths beamed together, which means that the **half note** is the beat unit.



Given any time signature, it is necessary to make sure that every measure has the same number of beats, and that the number of beats is the top number of the time signature. If we were to take our example and write the count of each bar, it would look like this:



As you count, you say “and” at the “+”. You can hear how this is done by viewing the video lesson. You’ll notice from the lesson that as you count music, you always count at the same pace throughout a piece, unless otherwise instructed in the music.

If  $\frac{3}{4}$  means that there are three quarter note beats in every bar, what can we say about the time signature  $\frac{3}{8}$ ? The top number, “3”, means that there will be three beats. But what kind of beat? Well, just check the “code” chart. The note corresponding to “8” in the time signature is the eighth note. There are three eighth note beats in  $\frac{3}{8}$ .

Actually, there are two types of time signatures in music--simple time signatures, and compound time signatures. We're dealing with simple time signatures here. Compound time signatures tell us the number of beats in a bar, but not in a direct way. Don't worry about it at all--that's for another lesson!

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## missing bar lines

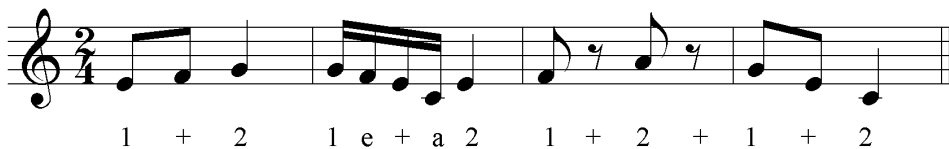
What if you received a piece of music where the composer put the time signature at the beginning, but forgot the bar lines, like this:



The time signature is  $\frac{2}{4}$ . That means that there are two quarter note beats in each bar. So count two quarter note beats, then draw a bar line. Let's check it out. The piece starts with two eighth notes, which equals a quarter note beat. Then comes a quarter note, for our second beat. Now we draw a bar line.

Next, we find four sixteenth notes. That equals one quarter note. Then comes a quarter note, making our second quarter note beat, and so we draw another bar line. The eighth note and eighth rest make our next quarter note beat, followed by another eighth note and rest. That makes our second beat, and so we draw a bar line. The piece ends off with a pair of beamed eighth notes followed by a quarter note.

It should work out that every bar gets two quarter note beats, because that's what  $\frac{2}{4}$  means. Here's what the piece looks like after the bar lines are drawn in:



# measures

---

In counting this piece, we say “and” where we see a plus sign (+). Look at the second bar. It shows “1 e + a”. This is how sixteenth notes are counted: “One-e-and-a”. You can hear the sixteenth notes counted by viewing the video lesson.

We say “One-e-and-a” when counting sixteenth notes where the *quarter* note gets the beat (like  $\frac{2}{4}$ , for instance). But in music where the *eighth* note gets the beat (like  $\frac{3}{8}$ , for instance), sixteenth notes get a plus sign (+, pronounced “and”), like this:



**Helpful hint:** Write down a simple time signature, and compose a simple rhythm piece by inventing some rhythms that fit that time signature. Once you’ve composed a short piece, perform it for your friends.

---

# glossary

**Measure (bar):** Division of music between the bar lines, defined by the time signature.

**Poco piu mosso:** A little faster.

**A tempo:** Original tempo.

**Tempo primo:** Original tempo.

**Poco a poco:** "Little by little."

# summary

Here's what we've learned about measures and time signatures.

We learned that music is usually divided up into **measures** or **bars**, indicated by vertical lines in the music:



We learned that every measure of music has a specific number of beats in it, and this is indicated by a **time signature**:



The top number in a time signature tells us how many beats in each bar, and the bottom number tells us what kind of note gets the beat. If the bottom number is 1, the whole note gets the beat. If it's 2, we're counting half notes, if it's four, we're counting quarter notes, and if it's 8, we're counting eighth notes.

The time signature  $\frac{4}{4}$  means that each measure contains four beats (top number 4) and the beat unit is a quarter note (bottom number 4).

Since each bar of music gets the same number of beats, we were able to take a time signature and draw in missing bar lines.

And finally, we learned how to **count** the music, by writing count numbers and syllables **"and,"** as well as **"e"**.



# F A Q

## 1. How fast should I count a piece of music? Do I keep the same speed?

Music usually has an indication written on it about what speed it should be performed. This will come in the form of words such as **Quickly**, or **Allegro**, or by specifying the number of beats per minute that the beat unit gets (for example, it may tell you to play at a rate of a quarter note per second). Unless otherwise indicated, you generally keep that pace up throughout the piece.

## 2. What if a composer wrote a piece of music as a waltz in $\frac{3}{4}$ , but then wanted to change to another time signature later on in the piece?

The composer would simply place another time signature wherever the change occurs. For example, here's a short four measure piece that has a time signature change in the middle:



## 3. Why is the bar line at the end of a piece different from other bar lines?

We usually place a double bar line at points of important change in music, and at the end of a piece, we thicken the line on the right to indicate the final measure



# lesson 7

In the last lesson, you learned all about measures, or bars, and time signatures. You also learned how to count music.

In this lesson, we're going to learn all about small intervals--the **semitone**, the **whole tone**, and the **tone-plus-semitone**.

## what is an interval?

An interval is the space, or distance, between notes. A small interval concerns notes that are close together. When we talk about intervals, we are speaking of two situations:

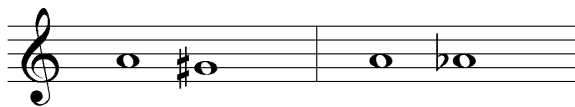
1. Where two notes are played together (that is, at the same time), and
2. Where two notes are played one after the other, as in a melody.

So if you walk up to a keyboard and plunk down two fingers at the same time, at random keys on the keyboard, you've just played an interval. Congratulations!

## semitones

We learned about semitones in Lesson 3. We learned that we could pick any note on a keyboard, and play a note that is a semitone higher or lower. If you need to review this, just flip back to Lesson 3 for a quick review.

There are two kinds of semitones. They sound the same, but are written differently. Look at this example:



# small intervals

Both of these semitones sound exactly the same. And if you were to play them on the keyboard, you'd see immediately that we're dealing with the same physical notes, using different note names. In the first bar, the notes are A and G#. In the second bar, the notes are A and Ab.

In print, we usually use a lower case "b" to indicate the flat symbol ♭.

As you can see, the notes G# and Ab are exactly the same notes! In the two bars of our example, the first bar shows a **diatonic semitone**, and the second bar shows a **chromatic semitone**:



So we would say that G# is a **diatonic semitone** lower than A. We would say that Ab is a **chromatic semitone** lower than A.

So we have two types of semitones, Diatonic and Chromatic. They are defined this way:

**Diatonic Semitone:** The smallest interval in our Western culture, in which the two notes are spelled using **different** letter names. Examples include: C, Db; G, F#; C, B

**Chromatic Semitone:** The smallest interval in our Western culture, in which the two notes are spelled using **the same** letter name. Examples include: C, C#; G, Gb; C, Cb

It's easy to remember which is which: "D for Diatonic, D for different."

Here are some more examples of semitones:



# small intervals

---

Let's check them out. The first example is labeled as a chromatic semitone, with the second note higher. D and D# are certainly a semitone apart (check this out on a keyboard if you need to), and because they use the same letter name, it is a **chromatic** semitone. The second example is **diatonic** because different letter names are used, F and E.

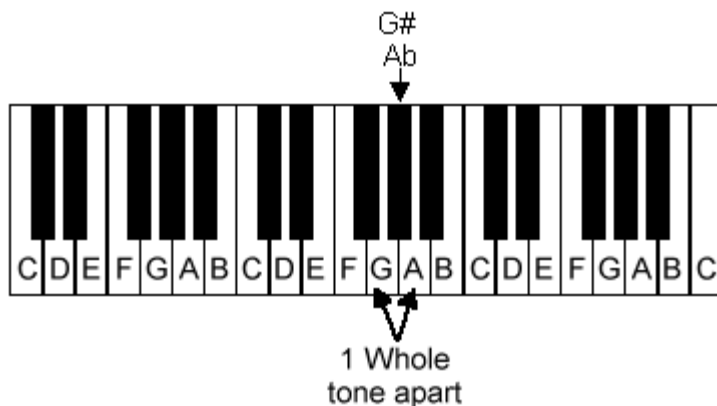
Continue through the examples, and make sure you understand why each is labeled diatonic or chromatic.

You will learn in later lessons that a diatonic semitone is also called a **minor 2<sup>nd</sup>**.

---

## whole tones

A **whole tone** is an interval that is the distance of two semitones. Look at this keyboard diagram:



The notes G and A are one whole tone apart, because there are two semitones between them, G to G# and G# to A. A distance of two semitones is called a **whole tone**.

When writing whole tones on the staff, remember this rule: If one note is written on a line, the next note is written on a space above or below it. If one note is written on a space, the next note is written on a line above or below it. And don't forget the other rule: the two notes must be a whole tone apart! Just because one note is written on a line, and one note is written on the adjacent space doesn't necessarily mean that they make a whole tone.

# small intervals

Look at this example:



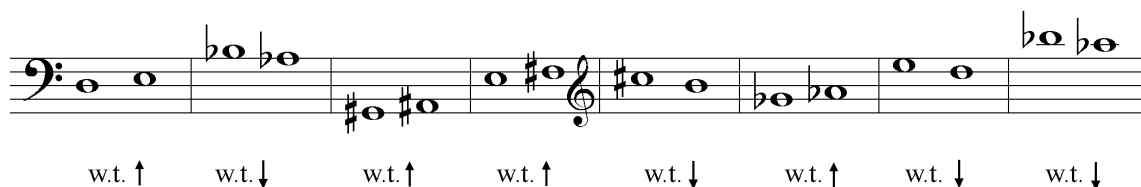
The notes E and F are on an adjacent line and space. Now find E and F on the keyboard graphic above. Notice that, there is no black note between them. That makes E and F a semitone apart, not a **whole tone**. To be a whole tone, both rules must be satisfied: the notes must be on an adjacent line and space, *and* they must be separated by two semitones. To make the second note a whole tone higher, you need to raise it a semitone, like this:



Confirm this yourself by checking it out on a keyboard, or the keyboard diagram above.

There is one other place on the keyboard where there is no black note between white notes: between B and C. A whole tone higher than B is C# (again, check it out on the keyboard).

Here are some written whole tones:



Remember, whole tones are written on adjacent lines and spaces. You will learn in later lessons that a **whole tone** is also called a **major 2<sup>nd</sup>**.



**Did you know...** When you play two notes on a piano, a semitone is created if one string vibrates 10 times for every 9 times the other string vibrates. A ratio of 9 to 8 produces a whole tone; 6 to 5 produces a tone-plus-semitone.

# small intervals

## tone-plus-semitone

The **tone-plus-semitone** is an interval that is a distance of three semitones, which, like the whole tone, is written on an adjacent line and space. Where one note is on a line, the next note is on the adjacent space above or below it. Where one note is on a space, the next note is on the adjacent line above or below it.

When writing the tone-plus-semitone intervals, make sure you have satisfied both requirements: the interval must be on adjacent lines and spaces, *and* the interval must equal three semitones.

Here are some tone-plus-semitone examples. Check them out on the keyboard so you can see the distance of three semitones.

T+st ↑    T+st ↓    T+st ↑    T+st ↓    T+st ↑    T+st ↓    T+st ↓    T+st ↑

Remember, the tone-plus-semitone intervals are written on adjacent lines and spaces. You will learn in later lessons that a **tone-plus-semitone** is also called an **augmented 2<sup>nd</sup>**.

Test yourself, or your friends: have someone play a note, then try to sing the note that is a semitone higher, or a semitone lower. Try it with whole tones and the tone-plus-semitone.

# glossary

**Interval:** Distance between two pitches.

**Mezzo piano:** Moderately soft.

**Mezzo forte:** Medium loud.

**Allegro agitato:** Quickly, with agitation.

**Largo ma non troppo:** Slowly, but not too slowly.

# s u m m a r y

In this lesson, we learned that there are three kinds of small intervals: the semitone, the whole tone, and the tone-plus-semitone.

There are two kinds of semitones: **diatonic**, referring to semitones using different note names (like A to Bb), and **chromatic**, referring to semitones using the same letter names (like A to A#).

A **whole tone** is an interval that is the distance of two semitones.

A **tone-plus-semitone** is an interval that is the distance of three semitones.

Both the whole tone and the tone-plus-semitone are written on adjacent lines and spaces.



## small intervals

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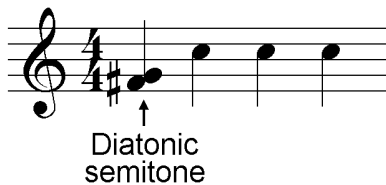
# F A Q

### 1. Is B to Db a whole tone?

No, because they are not on adjacent lines and spaces. You will learn in a future lesson that this interval is actually a **diminished 3<sup>rd</sup>**.

### 2. Are notes in an interval played at the same time, or one after another?

Both are referred to as intervals. In fact, when played at the same time, we refer to them as harmonic intervals, and played one after the other, we refer to them as melodic intervals. We have shown the intervals in this lesson as one note after another for clarity. In written music, a diatonic semitone that is meant to have both notes played at once would look like this:



### 3. Can I have intervals involving more than two notes?

Intervals concern two notes only. When more than two notes are involved, we call them **chords**, or **clusters**. This is explained in later lessons.

# lesson 8

In Lesson 7, we learned about the three types of small intervals: the semitone, the whole tone, and the tone-plus-semitone.

In Lesson 8, we're going to apply our knowledge of intervals as we learn about major scales.

A scale is a series of notes that proceeds upward or downward by step. "Step" means by tone or semitone, so that there are no skipped lines or spaces between the first and last notes. A **major scale** follows a particular pattern of tones and semitones. We'll explain this shortly.

In order to get the most out of this lesson, make sure you fully understand whole tones and semitones. Review Lesson 7 if necessary...

Scales are important because so much of the music you listen to or play is based on a scale. By learning how to write and identify scales, you will increase your understanding of how music works. And almost everything concerning the structure of music relates, in one way or another, to your understanding of scales.

Now, let's learn how to write a major scale step by step. (Hey, that's a pun. If you don't know *why* it's a pun, you need to start this lesson over again!)



**Did you know...** Major scales came into common use around the year 1600. Before that, music was often written using a type of scale called a **mode**. More about that in Lesson 23.

# major scales

## writing a major scale

Let's learn how to write major scales by writing an F major scale in the treble clef, using quarter notes.

Make sure you get a piece of staff paper right now, so you can learn to write a major scale just as shown below.



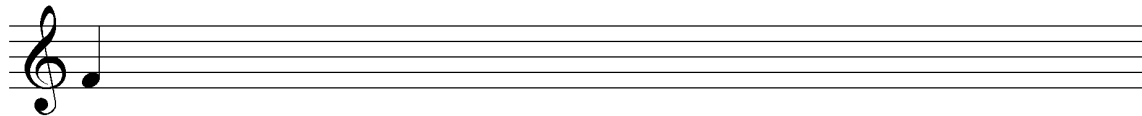
Writing a major scale consists of three steps:

1. Prepare your staff paper by drawing the desired clef;
2. Write your notes; and
3. Make sure the notes follow the correct pattern of tones and semitones.

Okay, here we go...

### step 1

Draw a treble clef on a staff. Then place an F on the staff as shown here:



### step 2

Write a note on each line and space, ascending for one octave. An **octave** is a note, or series of notes, which refers to another note (lower or higher) by the same name. So, an octave higher than the F on the first space, shown above, is the F on the top line. You can also number the notes, for clarity. When numbering, the bottom note is always 1, and the top note is 8, which of course is a repeat of 1, so we usually label it 8(1). Here, then, is our **octave** of notes starting on F:



# major scales

You'll remember from Lesson 5 that notes below the middle line have stems pointing upward; notes above the middle line have stems pointing down. And notes on the middle line (B, in this case) can go either way.

## step 3

We've now written a scale, but not necessarily a major scale. Major scales follow a certain pattern of tones and semitones. That's what gives them their characteristic "major" sound. Here is that all-important pattern of tones and semitones:

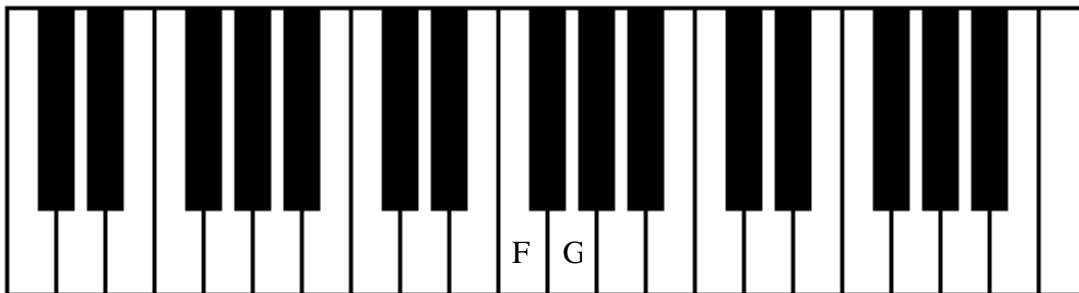
**Tone – Tone – Semitone – Tone – Tone – Tone – Semitone**

This pattern refers to the interval between each note of the scale. In other words, taking the pattern above, we need to make sure that there is a tone (meaning whole tone) between the first two notes of our scale (F and G), a tone between the second and third notes, a semitone between the third and fourth notes, and so on. We need to make sure that *each* interval of the scale conforms to the pattern shown above.

Here is a figure showing the intervals we're looking for:



So let's have a look. We'll start with the first two notes. According to the pattern, we need to have a whole tone between the first two notes, F and G. A quick look at the keyboard will confirm that there is indeed a whole tone between F and G:



# major scales

Therefore, the first interval in the pattern, “**Tone**”, is correct.

On to the next two notes, G and A. The scale figure shows that we’re looking for a whole tone between them. Check the keyboard; yes, there is a whole tone between them, and so the scale up to this point conforms to the major scale pattern.

The next two notes are A and B. According to the scale we’ve written, we’re looking for a semitone between A and B. But check the keyboard: there is a whole tone between A and B, not a semitone. We need to adjust that B to make it conform to the pattern. By looking at the keyboard, we see that a semitone above A is Bb. So let’s make that change, and see what we’ve got:



Notice that we’ve marked whole tone intervals with a brace bracket, and the semitone interval with a slur. Notice also that we’ve changed the B to a Bb, to make it conform to the major scale pattern.

Flats (b) and sharps (#) are known as **accidentals**.

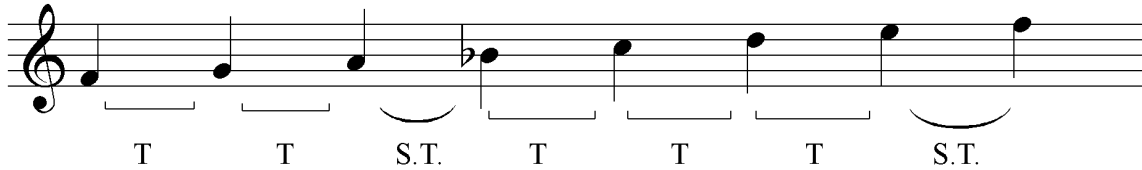
The next interval to check is Bb to C (not B to C—we’ve changed our B to a Bb!). According to the pattern, we’re looking for a tone. Remember, we’re making sure our scale conforms to this pattern:

**Tone – Tone – Semitone – Tone – Tone – Tone – Semitone**

Bb to C is a tone, and so it conforms, and therefore needs no adjustment. Next, we’re looking for a tone between C to D. Yes, there is, and so D needs no adjustment. Then comes D to E. We’re looking for a tone; C to D is a tone, and so no adjustment is necessary. We end off by looking for a semitone between E and F. The keyboard shows us that there is a semitone between E and F, and so no adjustment is necessary.

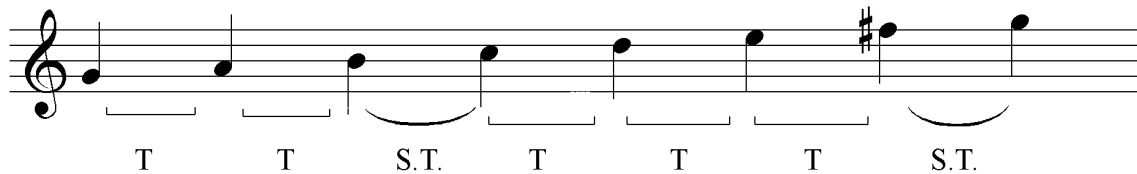
# major scales

That's it—we've finished our scale. We made a scale starting on F conform to the major scale pattern of tones and semitones by changing one note: B to Bb. Here is our finished F major scale:



Let's think about this a bit. In order for a scale to be a major scale, it *must* conform to the pattern of tones and semitones shown above. In order to make a major scale starting on F conform to that pattern, it *must* have a Bb. We would therefore say that an F major scale has a Bb. It's the only major scale that does. There is one accidental in an F major scale--a Bb.

Here's a major scale starting on G. Using the pattern, and the keyboard, make sure you understand why this is a G major scale. In particular, make sure you understand why the F was changed to an F#:



The G major scale uses an accidental of F#. The F major scale uses a Bb. Every major scale has its own set of accidentals. For instance, a D major scale uses two sharps. An Eb major scale uses three flats.

Make sure you write your scales using the process mentioned above. Start with an octave of notes, then go through the scale, making adjustments as necessary to make it conform to the pattern.

For practice, try writing an A major scale in the bass clef.

- **Step 1:** Draw your clef and starting note;
- **Step 2:** Draw an octave of notes; and
- **Step 3:** Starting with the first interval, make each interval conform to the pattern.

# major scales

## descending scales

Can we write scales in a **descending** pattern, that is, writing the top note first, then proceeding downward? Sure. In a descending scale, the pattern is of course reversed: ST, T, T, T, ST, T, T. If you are numbering the notes, don't forget that the numbering descends as well, with the top note labeled as 8(1), because the eighth (i.e., top) note is a repeat of the bottom note. Here is a descending G major scale.

8(1) S.T. 7 T 6 T 5 T 4 S.T. 3 T 2 T 1



When you write scales, make sure you leave room between notes for adding the accidentals.

# glossary

**Scale:** Any pattern of notes proceeding upward or downward by step.

**Accent:** To stress certain notes.

**Larghetto:** Slowly, but not as slowly as largo.

**Staccatto:** Short, detached notes.

# summary

We now know how to write major scales. The intervals between notes of an ascending major scale conform to a specific pattern:

**Tone – Tone – Semitone – Tone – Tone – Tone – Semitone**

There are three steps to writing a major scale. First, draw a clef and starting note. Then write an octave of notes. Finally, make each interval in the scale conform to the pattern of tones and semitones.

We learned that we add **accidentals** (sharps and flats) to make scales conform to the major scale pattern. Each major scale has its own set of accidentals. For instance, an F major scale uses a Bb. A G major scale uses an F#.

We also learned that descending scales are written like ascending scales, with the pattern reversed.



## major scales

---

# F A Q

**1. If someone tells me they are playing a major scale where the only accidental is a Bb, does this mean they are definitely playing an F major scale?**

Yes. The only major scale that uses a Bb only, and conforms to the pattern of tones and semitones, is F major.

**2. Is there such a thing as a major scale with a single accidental other than Bb, like Eb or Gb?**

No. You'll find out more about this in the next lesson on key signatures. You'll discover that when a scale has a single flat, it is Bb.

**3. Are there major scales that use both sharps and flats?**

No. And if you're interested, you could write out every major scale and see for yourself!

**4. Can't I write my G major scale using a Gb instead of an F#? I thought they were really the same note?**

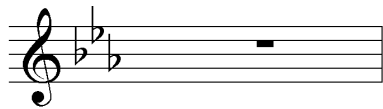
No, you can't do this because Step 2 says you must write an octave of notes on each line and space without skipping an lines and spaces. Using a Gb would put two notes on the G level, and no notes on the F level.



# lesson 9

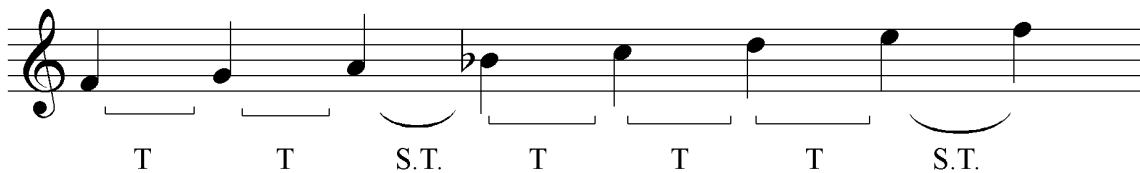
In the last lesson, you learned how to write major scales. In this lesson, you'll learn how to "collect" accidentals, and place them in a **key signature**.

You've no doubt seen key signatures before. They are the collection of accidentals (sharps and flats) at the beginning of each staff of music. When we see this...



...we know that every B, E, and A will be flat, unless canceled out temporarily by another accidental.

Here is our F major scale from the last lesson:

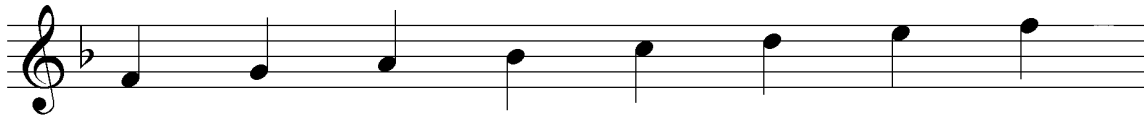


You'll remember that we had to make this scale conform to the pattern of tones and semitones, so we changed the B to Bb in order to make this happen. Let's remove some clutter by removing our brackets and letters:



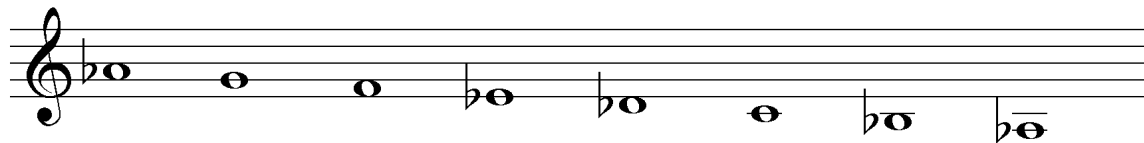
# key signatures

There. That removes some clutter and makes the music easier to look at. But we can go further. We can take that Bb in the middle of the scale, and move the flat sign to the beginning of the line, into a **key signature**. It looks like this:



By moving the flat sign to the beginning, I've changed nothing, musically. I know that when I get to the B note, it will actually be Bb. In fact, by moving it to the beginning of the line, this **key signature** tells me that *every* B will be flat (unless otherwise indicated in the music).

But moving a single flat to the beginning of a line is hardly removing clutter! True, but check out this descending Ab scale:



Okay, now there are some flats! Let's now take all of these flats and make a key signature, just like we did with F major above. Then make a list of the accidentals used; Ab, Eb, Db, and Bb. Now move them over to the beginning of the line, to make a key signature:



Unless otherwise canceled out in the music, this key signature tells us that every B will be flat, every E will be flat, every A will be flat, and every D will be flat. And we write the accidentals starting on the left, and moving right, writing first the Bb, then the Eb, then the Ab, and finally the Db.



**Did you know...** Music written using key signatures usually means that it resides “in a key.” Since the beginning of the 20<sup>th</sup> century, some composers write in a tonal system that does not conform to any systemized standard. Such music is often termed **atonal**, and will not use a key signature.

# key signatures

## the order of flats

Accidentals must be written in a certain order. But how did we know in what order to write them down? Why did we write the Bb first, for instance?

We have a phrase to help us remember the order of flats:

### **Battle Ends And Down Goes Charles' Father**

Take the first letter of each phrase, and you've got the order of flats. For Ab major, the first flat to be written is Bb (battle). Then comes Eb (ends), then Ab (and), and finally, Db (down).

This order is standard. No other order of flats is considered acceptable.

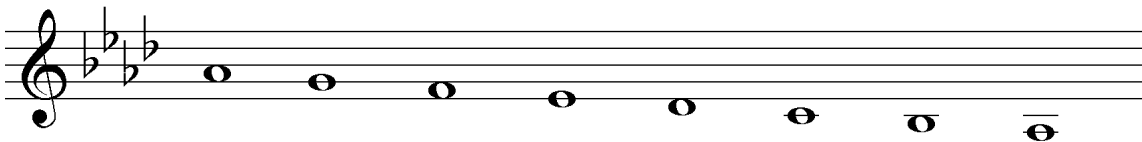
This is right...



...and this is wrong!



Our descending Ab scale, written with an Ab key signature, looks like this:



We removed all of the accidentals in the scale when we made our key signature because they are of course not necessary. This certainly reduced a lot of clutter. But more than that, the key signature says that *every* B will be flat, *every* E will be flat, *every* A will be flat, and *every* D will be flat.

So much for four flats. There are seven notes in a scale. All of them could be flat! What does a key signature of seven flats look like? Just continue the phrase: **Battle Ends And Down Goes Charles' Father**. Add the Gb, Cb, and Fb in order, like this:



# key signatures

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Remember, they have to be written in this order. Here is the key signature of seven flats, written in the bass clef:

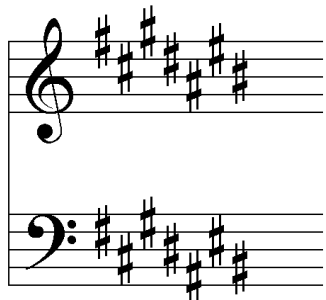


## the order of sharps

Now for the scales containing sharps. And the memory phrase? Simple. Just say it backwards:

**Father Charles Goes Down And Ends Battle**

So we place the F# first, then C#, and so on. Here is the key signature of seven sharps, on a grand staff:



Practice writing these key signatures so that you can easily recall how each sharp is placed on the staff.

---

## identifying the key

You now know that the key of F major has one flat, a Bb. Is the reverse true? Is a major key with one flat the key of F major? Yes!

# key signatures

This is important, because it means you can look at any key signature, and immediately identify the major key. We'll learn how to do this by using "solfa", our do, re, mi's. Remember those syllables?

*Do* (pronounced "doe") always refers to the first note of a major scale. Here are the rest of the solfa syllables, written on a major scale where every note is sharp:



These common syllables are used so that we can take advantage of a rhyme that will help us identify the key:

When sharps you see, the last is "ti."

Now look at the key signature. Seven sharps. With the rhyme in mind, you simply locate the last sharp in the signature. It's a B#. The rhyme says, "When sharps you see, the last is ti." This means that B# is *ti*. *Ti* is the solfa name for the seventh note, and *do* would be the eighth note (a semitone higher), the same as the first note. And the first note is of course the key we're looking for. Looking at our example, you'll see that we are in the key of C# (not C—don't forget the C is sharp, too).

Let's try another one. Here's the key signature of two sharps:



Don't forget, **when sharps you see, the last is "ti."** The last sharp we see is C#. If C# is *ti*, then *do* must be D (*ti* and *do* are separated by only a semitone; check it out on a keyboard if you have to!). This is the key signature of D major.

How about flats? We have a rhyme for this, too:

When flats there are, the last is "fa."

# key signatures

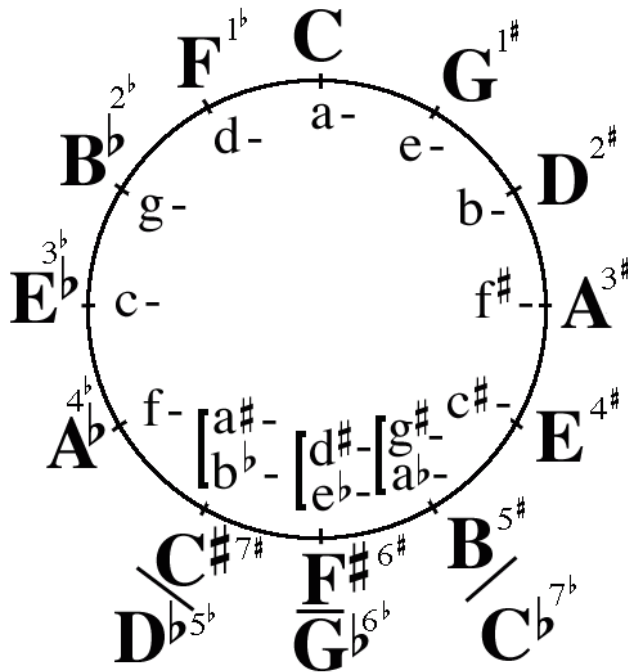
This rhyme tells us that the last **flat** in a key signature is *fa* on the major scale. *Fa* is the fourth note. What is the key here?



**When flats there are, the last is “fa.”** The last flat here is Ab. Ab is therefore the fourth note of the scale. Count down lines and spaces to the first note—it’s Eb. Eb major has three flats. Pretty simple.

## the circle of fifths

The absolute *best* way to remember key signatures is to write scales every day! It is also possible to remember key signatures by using a chart commonly called "The Circle of Fifths".



# key signatures

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You read the chart like a clock, with the key of C major at the twelve o'clock position, having no sharps or flats. Moving clockwise, the key in the one o'clock position will consist of one sharp; the key in the two o'clock position will consist of two sharps, and so on.

As you move clockwise, notice that each key is an interval of one fifth higher, and contains one more sharp. For example, G, in the one o'clock position, is a fifth higher than C, and has one sharp. D, at two o'clock, is a fifth higher than G, and has two sharps. Because you move around the circle by fifths, this chart is called the *circle of fifths*.

For key signatures with flats, start at C major (twelve o'clock) and move *counter-clockwise*. One fifth lower is F major, one flat. Another fifth lower is Bb major, two flats. Pretty simple. Notice also that the keys in the five, six, and seven o'clock positions are known by either sharp or flat names. For example, the key of C# major, seven sharps, is also known as the key of Db major, five sharps.

The minor keys that use the same key signature are placed on the inside of the circle. Take some time to study the chart closely. It will become easier to understand as you work your way through the Easy Music Theory lessons. But remember - *nothing* beats the time-honoured method of writing scales *every day!*

# glossary

**Accidental:** Any sharps or flats added to notes.

**Glissando:** To slide from one pitch to another.

**Fortissimo:** Very loudly.

**Mosso:** Motion.

**Meno:** Less, as in “meno mosso” (less motion).





## key signatures

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# F A Q

**1. Isn't it possible to have sharps and flats in a piece that are just one-time accidentals, not really part of the key at all?**

Yes, and when we get to a later lesson on key identification, you'll learn more about this. For now, you know from this lesson that if you saw a piece of music that used only one accidental, an Ab, this would not make a key signature because a one-flat key signature uses Bb only!

**2. If a piece of music were in G major (one sharp), and every F# were on the bottom space of the treble staff, do I put the F# in the key signature on the bottom space, or the top line?**

Always on the top line. Key signatures never change their look. A G major key signature has one sharp. It's *always* F#, and it's *always* on the top line.

**3. Do I put my key signature at the beginning of every line, or just at the beginning of the piece?**

Always at the beginning of *every* line.

# lesson 10

In Lesson 7, you learned how to name small intervals--intervals of a **second**: the semitone, the whole tone, and the tone-plus-semitone. We learned that when the notes of an interval are played together, it forms a **harmonic** interval. When the notes are played in sequence, that is, one after the other, it forms a **melodic** interval.

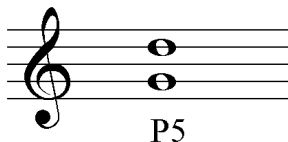
As a harmonic interval, a semitone sounds quite harsh (play a semitone interval on the keyboard and you'll see). The whole tone is harsh too, though not quite so harsh. And the tone-plus-semitone is not harsh at all.

Now we're going to learn about intervals that are larger than a second. The method we'll use to identify intervals can be applied to any intervals, large or small.

An interval name has two parts:

1. The **quality** of the interval, and
2. The **size** of the interval.

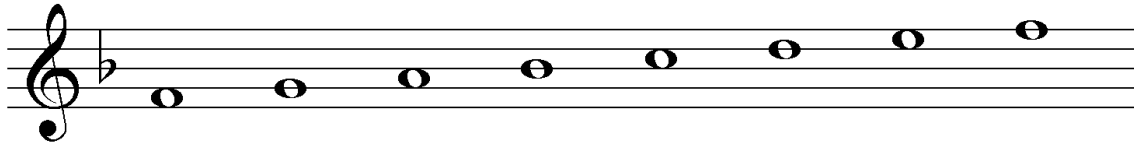
Look at this interval:



# intervals

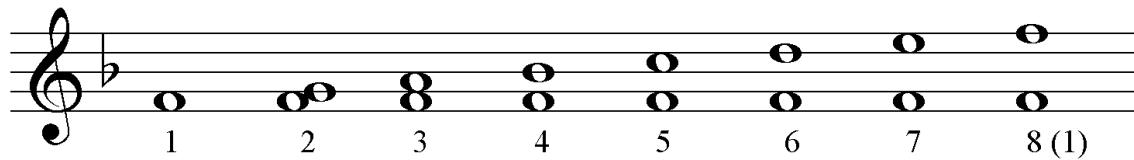
We see an interval with G on the bottom, and D on the top. The interval is named **P5**, which stands for **perfect 5<sup>th</sup>**. P stands for **perfect** (more on this later) and 5 refers to the size of the interval: counting lines and spaces from G to D, *including* the G, we count 5.

Let's back up a little. Here is an F major scale:



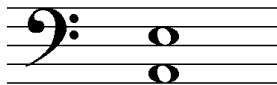
You'll remember from the last lesson that in the F major scale, F is called **do**. It has another name, too. In an F major scale, F is called the **tonic**, which means that it is the note on which the scale is based. In an A major scale, for example, the tonic note is A.

Using the F major scale, let's now form intervals between F and every other note of the scale:

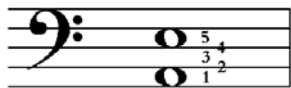


Interval sizes are marked under each interval. So you'll notice that between F and G, we have an interval of a second. That's because counting from the bottom note (including the bottom note), we count *two* from F to G. And from F to A, we count *three*, and so on.

Since we now know how to measure interval sizes, determine this interval size:



Just start with the bottom note and count lines and spaces, including the bottom note. We get 5. This is an interval of a **5<sup>th</sup>**:



# intervals



**Did you know...** Any interval that is more than one octave is called a “compound” interval. For example, the interval formed by a bottom note of C and a top note of E, 10 notes higher, is called a Major 10<sup>th</sup>. However, many musicians simply call it a Major 3<sup>rd</sup>, despite the octave displacement.

Try another one:

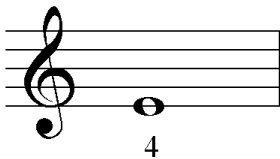


Counting lines and spaces from the bottom note, *including* the bottom note, we count seven. This interval is a **seventh**. Now try this one:

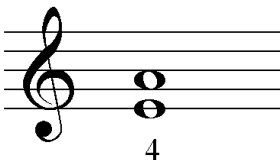


Counting A through F#, including the A, we get six. This interval is a **sixth**.

Pretty simple: given two notes, we can determine the interval. Now let's try it this way: Given the bottom note and the interval, determine the top note:



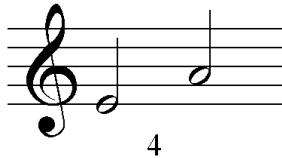
We need a fourth above this note. Starting on E, counting lines and spaces, we come to A. A fourth above E is A:



# intervals

---

By the way, notice that we're placing these notes one on top of the other. That means they would be played at the same time, and we call these **harmonic intervals**. Here is the same interval, a fourth, written as half notes to be played one after the other. We call this a **melodic interval**:



---

## interval quality

Not only do intervals have a **size**, but they have a **quality**, too.

Regarding quality, there are three different kinds of fifths:

1. Perfect fifths
2. Diminished fifths
3. Augmented fifths.

In the video lesson, you can hear that there is a big difference in sound between these three kinds of fifths.

Let's learn to identify the three different types of fifths.

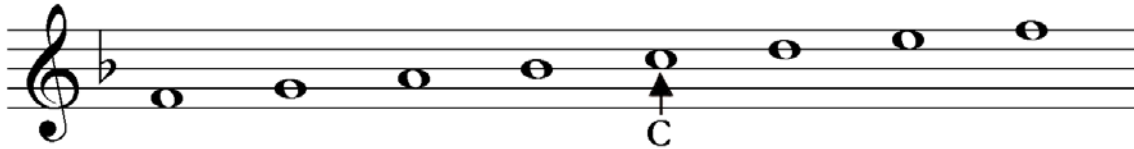
First, the **perfect** fifth. How do we identify it? It's easy—just follow this rule: **if the top note is in the major scale of the bottom note, the fifth is perfect**. Look at this fifth:



# intervals

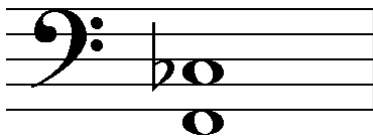
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Is it a *perfect* fifth? Is the *top* note on the major scale of the *bottom* note? Is there a C in an F major scale?



Yes, C is in the F major scale, so the interval of F to C is a **perfect** fifth. Intervals that are perfect are often described as sounding pure, hollow, or bare.

What if we had a fifth using the notes F and Cb?

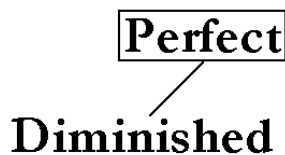


First, we ask the question, **is the top note the major scale of the bottom note?** We see from the scale above that there is a C, not Cb. Cb is a semitone smaller than C. When the interval is smaller, we call it **diminished**. This is therefore a **diminished fifth**. When writing the diminished fifth, we indicate it as “<sup>o</sup>5”, or with “dim 5”.

Here is a measure of various diminished fifth intervals. Make sure you understand why they are diminished fifths: they are fifths, but in each interval, the top note is not in the major scale of the bottom note. Each interval is a semitone less than a perfect interval.



Remember, diminished intervals are smaller than perfect intervals.



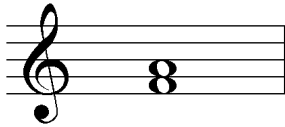


# intervals

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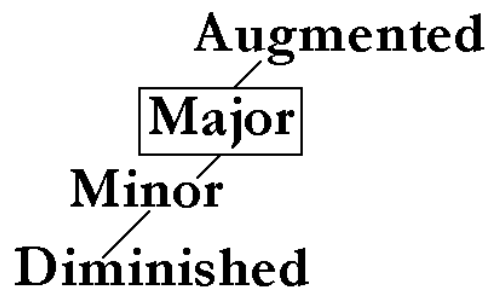
The word **perfect** is outlined to show the quality of the interval when the answer to the question is “yes.” If the interval is too large to be perfect sounding, it is augmented. If it is too small to be perfect sounding, it is diminished. Augmented and diminished intervals do not have the same pure or bare sound as perfect intervals.

So that takes care of the bare-sounding intervals--the first, fourth, fifth, and eighth. What does that leave? We still have to deal with the second, third, sixth, and seventh. These ones are the intervals we describe as being **major** or **minor**. They are never described as being perfect. Look at this one:



It's a third, of course, because F is 1, then counting up, A is the third above. But what kind of third is it? We answer this by asking the same question as before: **Is the top note in the major scale of the bottom note?** In other words, is there an A in an F major scale. You remember from your F major scale that there certainly is an A. When the answer is yes, the interval is **major**. This interval is a **major third**.

There are four intervals that can be thought of as major: the second, third, sixth, and seventh. Of these non “non-perfect” intervals, there can be four types: major, minor, diminished, and augmented.

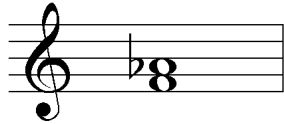


The word **major** is outlined to show the quality of the interval when the answer to the question is “yes”. If the interval is too large to be major sounding, it is augmented. If it is too small to be perfect sounding, it is minor. If it is a semitone smaller than minor, it is diminished.

# intervals

---

We know the major third. To make a minor third, we just make the top note a semitone smaller. Is the top note in the major scale of the bottom? No, it's a semitone smaller, and that makes it a minor third.



Even though the chart above shows that we can make a minor interval smaller by one more semitone, you might think it's impossible, because we already are using a flat. Actually, we can –we just add another flat, like this:



That note is called, logically, a **double flat**, and it's covered in later lessons. It's shown here to demonstrate the diminished third.

What do you do about intervals for which we have no major scale for the bottom note, like this one:



We don't have a B# major scale. (That job has been filled by the C major scale!) One easy way to figure out the interval is to just imagine each note a semitone lower. That makes the interval a B to an Eb. Since we have a B major scale, we now ask, is there an Eb in a B major scale? No, there's an E natural instead. Eb is a semitone lower than E, so the interval is a diminished fourth.



To name an interval, always find the number **first**, then figure out the quality of the interval (perfect, major, minor, etc.).

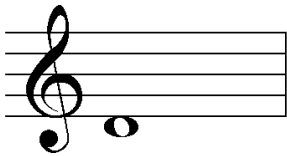
# intervals

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- There are two types of intervals: those that can be considered **perfect**, and those that can be considered **major**.
- Perfect intervals are the unisons, fourths, fifths, and octaves.
- Major intervals are the seconds, thirds, sixths, and sevenths.
- Major intervals cannot be perfect. Perfect intervals cannot be major. You cannot have a major fifth. You cannot have a perfect sixth. You cannot have a minor fourth. You cannot have a perfect second.

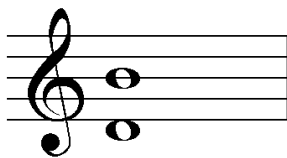
Let's say you were asked to write an interval above a given note, like this:



How would we write a major sixth above this note? We do it in two steps:

1. Write the note on the correct line or space; then
2. Alter the top note if necessary to match the desired interval quality

First, let's write a sixth above D:



# intervals

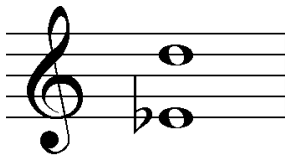
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Second, determine if the top note needs to be altered. We're looking for a major sixth. So we ask, is there a B in a D major scale. The answer of course is yes, and so the note does not need to be changed. Had we been looking for a minor sixth, we would have to flatten the top note.

Now let's write a minor seventh above Eb:



First, we write our seventh:



Next, we check the quality. We're looking for minor. Is there a D in an Eb major scale? Yes, so the interval as shown is major. We want minor, so we must flatten the D in order to get an interval of a minor seventh:



When you are asked to write an interval *below* a given note, the process is similar. Just count *down* from the given note. Then the question is the same: is the top note in the major scale of the bottom note?

# glossary

**Rallentando:** To slow down gradually.

**Maestoso:** Majestically.

**Presto:** Very quickly.

**Andante:** A walking tempo, rather slow.

## s u m m a r y

In this lesson, we learned how to name intervals. We learned that naming intervals consists of two steps:

1. Determining the **number** of the interval; and
2. Determining the **quality** of the interval.

To determine the number of the interval, count up from the bottom note, including the bottom note.

To determine the quality of the intervals, we ask, **is the top note in the major scale of the bottom note?** If it is, the quality is **perfect** for unisons, fourths, fifths, and octaves, and **major** for seconds, thirds, sixths, and sevenths. If the answer is no, then the quality will be either diminished, major, minor, or augmented, in accordance with these charts:



## F A Q

### 1. Why use double flats? Instead of A double flat, why not use G?

There are times when G *would* be used, often for ease of performance. But just as often, the composer will want to maintain the principles of music theory in a composition. So, when the composer writes a diminished fourth with the bottom note F, it would be *technically* correct to use a B double flat.

### 2. If I'm given a minor 3<sup>rd</sup> of F to Ab, and asked to make it major, can I choose to either sharpen the Ab or flatten the F?

Yes, if it's not important what notes are used, by all means, flattening the bottom note, or sharpening the top would make the interval major. (And for extra points, what happens to a minor third if you *both* sharpen the top note and flatten the bottom? In your worksheets, remember: never change the note that has been given to you.)

### 3. I've heard of intervals of ninths. Why aren't these covered in the lesson?

Intervals larger than an octave are called compound intervals. Simply subtract 7 from it to see the other interval that it is related to. For example, a ninth is just a second with an octave in the middle.

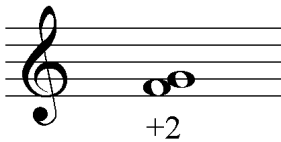


# lesson 11

In the last lesson, you learned all about intervals--how to write them, and how to identify them. Now you will learn how to invert them.

To invert an interval simply means to *flip* it--what was on the top is now on the bottom, and what was on the bottom is now on the top.

Consider this interval:

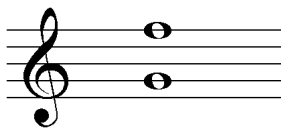


As you know, it's a **second** because the top note is two notes away from the bottom note (counting the bottom note as one). And it's **major** because the answer to the question, "Is the top note in the major scale of the bottom note?" is yes, meaning **major**. Don't forget, to show major, we can use a plus sign (+) or a capital letter M.



If this feels a bit unfamiliar, you may want to go back and review Lesson 10 right now.

Let's now invert this interval. Remember, to invert an interval simply means to *flip* it-- what was on the top is now on the bottom, and what was on the bottom is now on the top. So let's take the F and move it up one octave, and leave the G where it is:

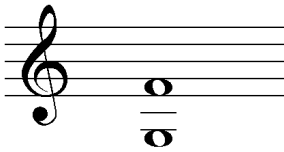


# inverting intervals

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We've done it: what was on the bottom is now on the top. What was on the top is now on the bottom. Let's name this interval. Counting up from the bottom note, including the bottom note, we find that this interval is a **seventh**. What kind of seventh? Is there an F in a G major scale? No, there's an F sharp in a G major scale. This is a semitone smaller, so that means it's a **minor seventh**. We indicate a minor seventh with **m7**, or simply **-7**.

Here is another way to invert the interval. Instead of moving the F up an octave, move the G down an octave, like this:



The interval is positioned differently, but the result still gives F on the top, and G on the bottom. And so the question is the same: is there an F in a G major scale? No, so this again is a minor seventh. So either method works—either move the bottom note up an octave, or move the top note down an octave. You'll get a minor seventh.

---

## simplifying inverting intervals

Here are some rules that will make inverting intervals very simple:

*Octaves invert to unisons*  
*Sevenths invert to seconds*  
*Sixths invert to thirds*  
*Fifths invert to fourths*

So did you notice? Unisons invert to octaves, and octaves invert to unisons? And that's not all. Notice for instance that fifths invert to fourths. Five plus four equals nine. Sixths invert to thirds. Six plus three equals nine. Octaves (8) plus unisons (1), sevenths (7) plus seconds (2). Nines again.



All intervals and their inversions add up to nine!

# inverting intervals

---

Here is another easy interval rule:

*Perfect* inverts to *perfect*  
*Major* inverts to *minor*  
*Diminished* inverts to *augmented*

And again, the reverse is also true: for example, minor inverts to major. Using these two charts, you can perform interval inversions with ease:

- A perfect fifth inverts to a perfect fourth
- A minor sixth inverts to a major third
- A major seventh inverts to a minor second
- A diminished fourth inverts to an augmented fifth

It's easy!



**AND REMEMBER:** There are two ways to invert an interval. Take the top note and move it down an octave, or take the bottom note and move it up an octave. Either way, you will wind up with the same result.

# glossary

**Unison:** The same pitches played together.

**Marcato:** Strongly accented.

**Allegro Moderato:** Faster than moderato, but slower than allegro.

**Grace note:** Quick note that appears before the main note.

**Semplice:** Simply.

## s u m m a r y

In this lesson, we learned how to invert intervals. When we invert an interval, what was on the bottom is now on the top, and what was on the top is now on the bottom. This can be accomplished either by moving the top note down an octave, or by moving the bottom note up an octave.

We also learned that the number of the interval plus its inversion adds up to nine. So, sevenths invert to seconds. Fifths invert to fourths, and so on.

- A perfect fifth inverts to a perfect fourth
- A minor sixth inverts to a major third
- A major seventh inverts to a minor second
- A diminished fourth inverts to an augmented fifth

Finally, we learned that perfect inverts to perfect, major inverts to minor, and diminished inverts to augmented.



## inverting intervals

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# F A Q

**1. Is there any such thing as an augmented unison?**

Technically, yes, but it has very little, if any, use. An augmented unison sounds like a minor second, and there is no key or tonality that requires the use of an augmented unison. Are you sorry you asked?

**2. Even though I can choose either to move a note up an octave, or another note down an octave, the result is not exactly the same, is it? I mean, the actual notes are different.**

That's right. The interval is the same, but one interval is an octave lower than the other.

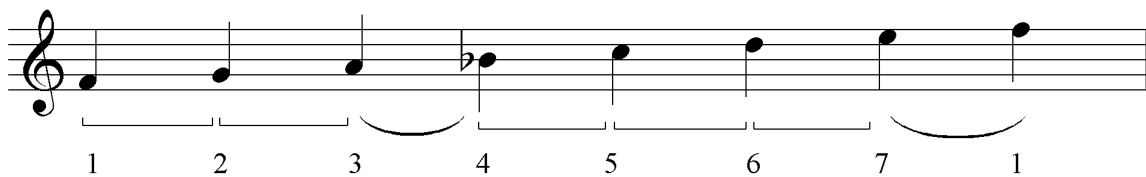
# lesson 12

In Lesson 8, you learned how to write major scales. You'll recall that major scales follow a certain pattern of tones and semitones:

**Tone, tone, semitone, tone, tone, tone, semitone**

Now we're going to deal with **minor** scales. If you understand the construction of a major scale, you're going to have no problem at all with the minor scale.

Here is our familiar F major scale again:



We've used an accidental Bb here in place of a key signature. Each note of the scale is numbered from 1 to 7. The final note is 1 because it's a repeat of the first note.

Take a piece of manuscript paper and write this scale now.

We have another way of naming the notes of a scale. Rather than a number, we can use a technical name for each note. A technical name is a word that identifies the note, and we often speak of the function of the note by using its technical name.

# minor scales

Here is a chart of the technical names of notes of a scale:

Note Number	Technical Name
1	Tonic
2	Supertonic
3	Mediant
4	Subdominant
5	Dominant
6	Submediant
7	Leading Tone

Each number refers to the numbered notes in our F major scale, above.

In Lesson 9, you learned that a key signature applies to a particular major scale. Now we're going to learn that each key signature applies to a particular **minor** scale as well. So any given key signature has a major scale *and* a minor scale associated with it.



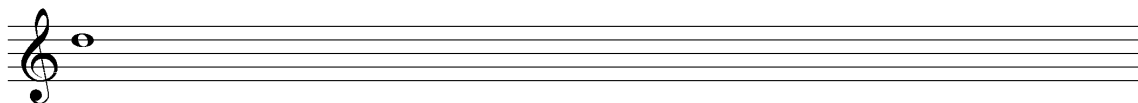
## DID YOU KNOW...

The word “minor” means “lesser.” The minor scales evolved out of certain kinds of modes (see lesson 23) during the 17<sup>th</sup> century, and were called “the scale with the lesser third.”

Our F major scale uses one flat in the key signature. How do we find the minor scale that has a key signature of one flat?

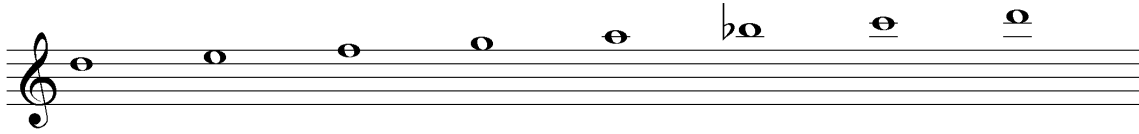
Simple: go to the sixth note of the major scale—the **submediant** note. If you write a scale starting on that note, you will wind up with a minor scale. Let's try this using our F major scale.

The submediant note in the F major scale is D. Write a D on a piece of manuscript paper like this:



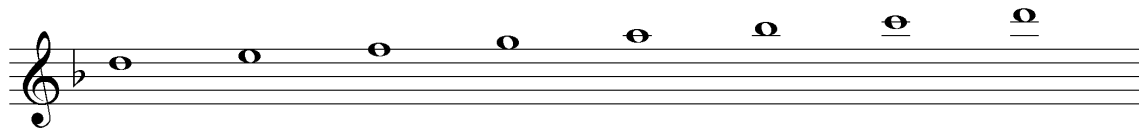
# minor scales

Now draw a scale of notes, starting on D, proceeding upwards for one octave. We're using the same key signature as F major, so don't forget your Bb:



Congratulations. You've just written a D minor scale!

D minor is called the **relative minor** of F major, because it's related to F major. How? It uses the same key signature. Let's get rid of our accidental by making a key signature of one flat:



Play this scale on your instrument. Notice how the sound of this scale differs from a major scale.

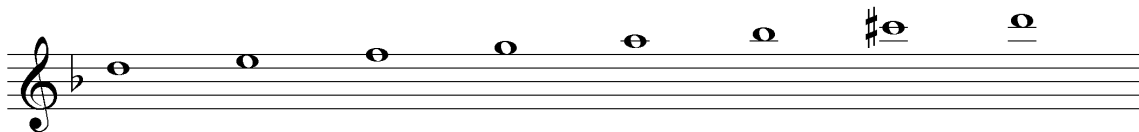
## three types of minor scales

There are three types of minor scales:

1. the **Natural** minor
2. the **Harmonic** minor
3. the **Melodic** minor

You've already seen the natural minor. It's formed by starting a scale on the submediant note of a major scale. The natural minor is sometimes called the **pure minor**.

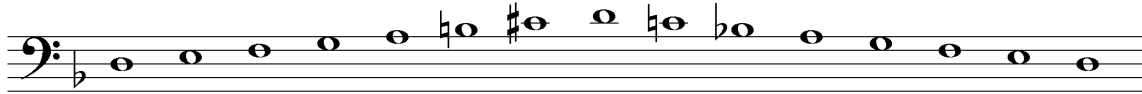
To form a harmonic minor scale, take the natural minor and raise the seventh note. In our D minor scale, we raise the C to a C#, like this:




# minor scales

Notice how the raised seventh degree of the scale changes the sound of the scale as you play it on your instrument.

To form a melodic minor scale, raise the sixth and seventh notes of the scale on the way up, and put them back in their natural state on the way down, like this:



Notice the use of the natural sign , which cancels out the Bb, making it simply “B”. And, on the way down, the C# is turned back into C natural by using the natural sign.

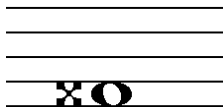
Because the melodic minor scale looks different ascending and descending, you must always write a melodic minor scale both ascending *and* descending.

Play the melodic minor scale a few times on your instrument.  
Notice how it differs ascending and descending.

Always play examples in this course. It will give you important experience with the sound of music, not just the theoretical mechanics of music (even though the hills truly are alive with the **theoretical mechanics of music**, which admittedly makes a poor movie title).

## double sharps and double flats

It is possible to place a symbol in front of a note that raises or lowers that note by two semitones. A double sharp raises a note by two semitones. It looks like this:



A double flat lowers a note by two semitones. It looks like this:



# glossary

**Grazioso:** With grace.

**Grave:** Slow and solemn.

**Mesto:** Sadly.

**Vivace:** Very quickly.

# summary

We have learned that notes of a scale may not only be referred to by number, but also by **technical** name—tonic, supertonic, mediant, subdominant, dominant, submediant, and leading tone.

Every key signature refers to a particular major scale, *and* a particular **minor** scale. Because they share the same key signature, they are called related keys. The minor key that uses the key signature of a major key is called the **relative minor** of that major key.

We also learned that there are three types of minor scales: the natural minor, the harmonic minor, and the melodic minor. The natural minor is a scale based on the submediant of its relative major. The harmonic minor is formed from the natural minor, with a raised seventh note. The melodic minor uses raised sixth and seventh notes on the way up, and then uses the natural minor form on the way down.

And finally, we learned about double sharps and double flats. A double sharp raises a note by two semitones, and a double flat lowers a note by two semitones.



## F A Q

### 1. Why all the different types of minor scales?

Each scale *sounds* different, and so there are different uses for each, based upon the desires of the composer, and how a piece of music is arranged or harmonized.

### 2. D minor is not only related to F major; it's related to D major too—they are based on the same note!

This is true. But since they both start on the same note, D minor is called the **parallel minor** of D major.

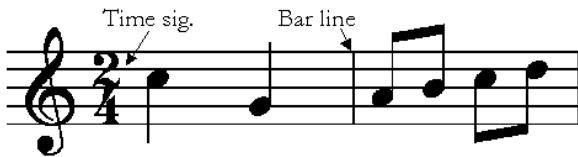
### 3. Minor scales start on the sixth note of a major scale. Can I make scales that start on other notes of the major scale?

Sure. These new scales are not minor scales. They are called **modes** and they are covered in Lesson 23 (wait for it!).



# lesson 13

You'll recall from Lesson 6 that composers use vertical lines on the staff to place music into "compartments" called **measures** or **bars**. Take a look at virtually any piece of music, and you'll see this clearly. Measures are separated by bar lines.



You'll also notice a time signature at the start of the music. A time signature consists of two numbers, and in this lesson, we're going to learn what those two numbers signify.

There are two types of time signatures:

1. Simple time signatures. These *directly* state the number of beats in each measure. For example,  $\frac{2}{4}$  tells us that there are two quarter note beats in every bar; and
2. Compound time signatures. These *indirectly* state the number of beats in every bar.  $\frac{6}{8}$  is an example. We haven't encountered compound time signatures yet. You'll learn all about them in this lesson.

## simple time signatures

As you've seen from previous lessons, simple time signatures tells us two things:

1. How many beats are in each bar; and
2. What kind of note gets the beat.

# time signatures

Study this example:



Notice the time signature of  $\frac{2}{4}$ . It's clear that this means that there are two beats in every bar, and that the quarter note gets the beat. (Remember the "code" from Lesson 5?) That's pretty simple!

There's something else here: look at those eighth notes in the second measure. Notice that they have been beamed together into pairs. These eighth note pairs add up to a quarter note each. The composer is showing us that the quarter note *gets the beat* in this piece of music. Beaming notes so that the beat units are seen clearly makes the music easier to follow.

In order to see the beat units more clearly, here is the same music with the beat units written above:



If we were to count along with this piece of music as it is being played, we'd count "1,2,1,2,1,2" in time with the quarter note beats that are shown.



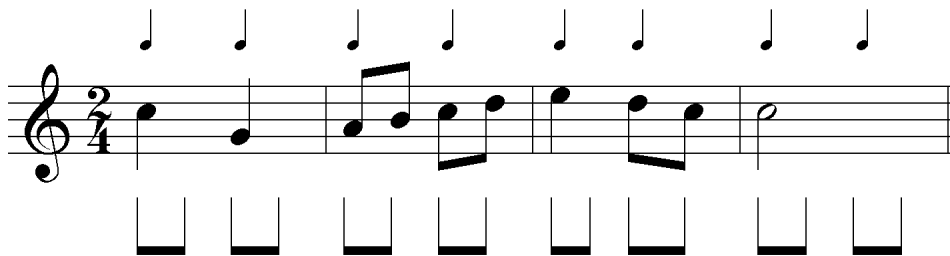
So simple time signatures  
have these four  
characteristics.

1. The beat is an undotted note (♩)
2. They show the number of beats in each bar (for example,  $\frac{2}{4}$  means that there are two quarter note beats in each bar)
3. Each beat subdivides into two components (for example, a quarter note beat subdivides into two eighth notes)
4. The top number in the time signature is not divisible by three

# time signatures

Although we say that the top number is not divisible by three, oddly enough, there is one exception:  $\frac{3}{4}$ . This time signature is considered simple because it follows the other three rules: the beat is an undotted note, it shows the number of beats in each bar, and each beat subdivides into two components, or breakdown beats.

In simple time signatures, each beat can be **subdivided** into two parts. Quarter note beats subdivide into eighth notes. Here is the same excerpt with the subdivision, or breakdown, shown underneath:



## compound time signatures

Compound time signatures feel a bit different. Listen to a piece of music written with a compound time signature, and you'll recognize immediately that it has a "triple-time" feel—like a waltz, for instance. You can hear that each beat has three parts.

Unlike simple time signatures, compound time signatures *do not* directly show us the number of beats per bar. Instead, they show us the **number of breakdown notes per bar**.

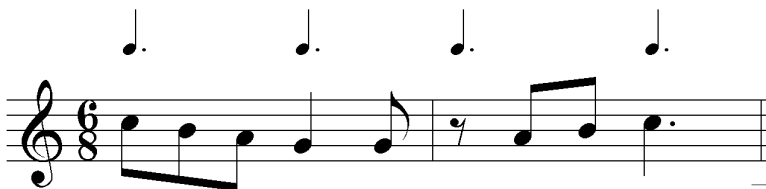
Look at this excerpt:



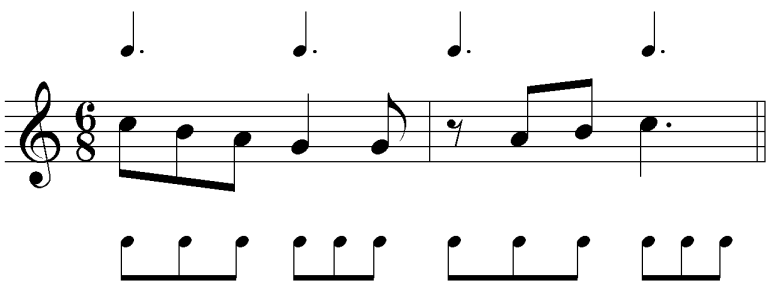
In this excerpt, we can see the writer has beamed the first three eighth notes together. The writer is showing that the first three eighths form one beat; that's why they were beamed

# time signatures

together. We therefore need to take the eighth notes and "condense" them to discover what the beat is. Condensing the three eighths down to one note gives us a dotted quarter. (One 8th plus one 8th plus one 8th equals one dotted quarter note.) In other words, the beat in a bar of music is the dotted quarter. You can see that by going through the two bars of the excerpt, it is possible to apply dotted quarter note beats. Here's what it looks like:



Just like with simple time signatures, we can break down each beat into beat subdivisions. However, though simple time beats break down into two parts, **compound time beats break down into three parts:**



You can see that each bar has six breakdown notes. The breakdown notes are **eighth** notes. Therefore, the time signature is  $\frac{6}{8}$ .



Here are the four rules that define compound time signatures.

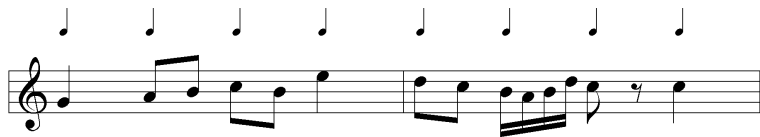
1. The beat is a dotted note (♩.)
2. Each beat subdivides into three components
3. The top number is evenly divisible by 3 (except for time signatures *with* three)
4. They show the number of breakdown notes in each bar (for example,  $\frac{6}{8}$  means six eighth note subdivisions in each bar).

# time signatures

So that covers simple and compound time signatures. You now have enough information to determine what time signature this excerpt is in:

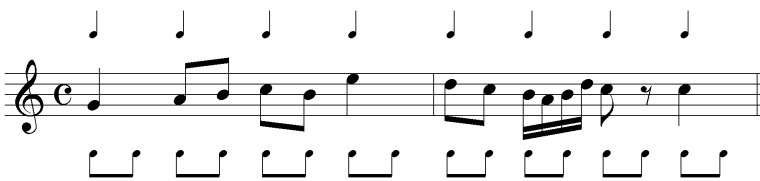


Look at bar one. Notice that the eighth notes are beamed together in groups of two. Each one of those eighth note pairs can "condense down" to form one quarter note. This looks like a simple time signature, because with compound time signatures we would expect to see groups of three breakdown notes, not two. Since we see two eighth notes condensing to form a quarter note beat, we ask, can we apply a quarter note beat pattern to the whole excerpt? Yes. Here is the excerpt with the quarter note beats drawn above each bar:



Each set of eighths and sixteenths can condense down to quarter note beats. Therefore, this is a simple time signature of  $\frac{4}{4}$ , since there are four beats in each measure (and each beat is able to break down to *two* breakdown notes).

By the way,  $\frac{4}{4}$  is also known as **common time**. Often, instead of using  $\frac{4}{4}$ , composers will simply use the designation **C**:



## DID YOU KNOW...

Although we say that a "C" stands for "common" time, that's actually not exactly true! Hundreds of years ago, when time signatures were first used, a complete circle was used to indicate music in triple time, and a half circle (or "C") was used for music in quadruple time.

# time signatures

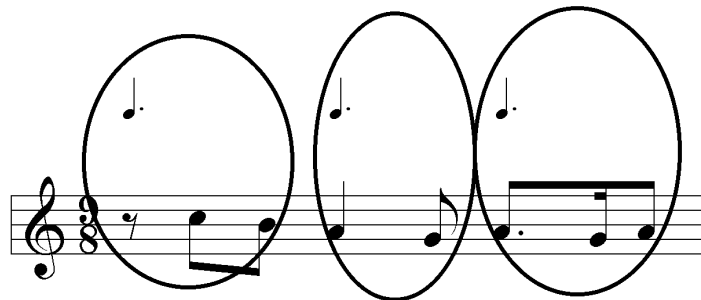
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Here is another one:



Look at how the eighth notes have been beamed. Notice, in particular, the last group of notes at the end of the first bar. The dotted eighth, sixteenth, and eighth note have all been beamed together.

If we condense those three notes down, we get one note that is a dotted quarter in length. It appears that perhaps the dotted quarter will be the beat unit in this excerpt. Let's see if we can apply a dotted quarter beat to the entire excerpt. The eighth rest and two eighth notes at the beginning would certainly be explained in terms of a dotted quarter beat. That leaves the quarter note and eighth note in the middle, and that, too, can fit into the dotted quarter beat pattern. Here's the first bar, with lines drawn around each beat:



This excerpt obeys all the rules for a compound time signature. When you look at the rest of the excerpt, you can see that the second bar also fits the dotted quarter beat pattern: the two sixteenths plus two eighth rests add up to equal one dotted quarter; obviously the dotted quarter in the middle is easy; and the six sixteenths at the end condense down to form a dotted quarter.

What is the time signature? The beat is a **dotted** note, so this is compound time. That means that we simply count up the breakdown beats in a bar. How many breakdown beats? Nine.

What kind of breakdown beats? Eighth notes. The time signature is therefore  $\overset{9}{8}$ .

---

In triple time signatures, the upper number does not tell us the number of beats per bar; it tells us the number of breakdown notes per bar.



# time signatures

---

The image displays musical notation for time signatures. At the top, six dotted quarter notes are arranged horizontally. Below this, a treble clef is followed by a 3/8 time signature and a musical phrase consisting of six eighth notes: a quarter rest, a quarter note, an eighth note, a dotted quarter note, and two eighth notes. Below the treble staff, a bass clef is followed by a 3/8 time signature and a musical phrase consisting of six eighth notes: a quarter note, a quarter note, and four eighth notes.

As you can see, it's easy to figure out if a piece of music is written in simple or compound time. Just take the rules for simple time and try to apply them to the music. As soon as it fails the test, check for compound. In the last excerpt, you can see that it immediately fails the test of the beat unit: the excerpt does *not* use an undotted note as the beat unit. Switching over to the compound rules shows that it indeed follows those rules.

And don't forget, above all, *listen* to the music. Confirm it with your ears! You can *hear* the difference between simple and compound. Does it have a triple feel to it? If it does, it's likely compound.

# glossary

**Waltz:** Dance in  $\frac{3}{4}$  time.

**Prestissimo:** As quickly as possible.

**Animato:** In a playful or animated style.

**Appassionato:** With deep feeling.

## s u m m a r y

In this lesson, we learned that there are two kinds of time signatures: simple time signatures and compound time signatures. Music written in simple time shows the number of beats in

each bar. For example,  $\frac{2}{4}$  tells us that there are two quarter note beats in every bar. Also, each beat is able to subdivide into two breakdown notes.

Compound time has a triple-time or waltz feel—like there's three parts to each beat. In compound time, the beat is a dotted note that is able to subdivide into three breakdown notes.



## F A Q

1. In  $\frac{6}{8}$ , are there six beats, or two?

There are two. There are six breakdown notes, three per beat. Review this lesson if you have to!

2. When does one use  $\frac{2}{4}$  instead of  $\frac{4}{4}$  (and vice versa)?

Music played in either key signature will of course sound exactly the same. But when you think of music have certain strong beats, and certain weak beats, you will find some music is thought of in one time signature and some is thought of in another. For the most part, the choice of time signature in these cases is somewhat arbitrary.

3. I've seen a piece of music in  $\frac{7}{8}$ . The top number isn't evenly divisible by three. But it doesn't seem like simple time either. Which is it?

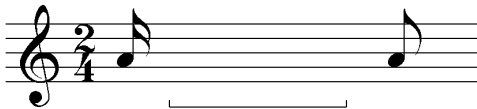
This is an example of what we call an **asymmetrical** time signature, which is to say that each beat is actually a different length! In  $\frac{7}{8}$  time, one beat will usually be four eighth notes long, the other, three.

# lesson 14

In Lesson 13, you learned about time signatures. You know that time signatures tell us the number of beats and breakdown notes in each bar. We can use that information to take a bar of music that has missing notes and rests, and complete the bar.

If you'd like to have a bit of a refresher on simple and compound time signatures, just go back to Lesson 13 now and review it.

Let's take an incomplete bar of music, and complete it by filling in the missing parts with rests:

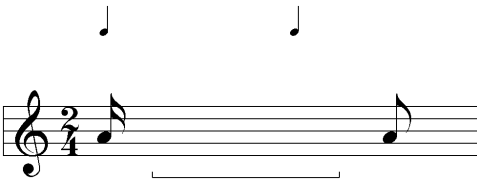


We need to fill in the blank space in the middle of the bar with rests. We do this by following three steps:

## step 1: determine if the signature is simple or compound

The first rule in determining the type of time signature is to see if the top number is evenly divisible by three. No, this one isn't. That means it's a simple time signature (this is covered in Lesson 13).

The  $\frac{2}{4}$  time signature tells us that there are two beats in each bar (it's a simple time signature) and that the beat unit is a quarter note (indicated by the bottom number 4). So we can now place notes above the music to indicate the beat units:



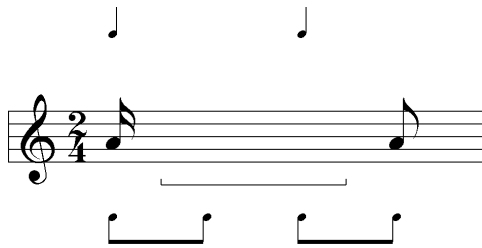
# measure completion

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How did we know where to place that second quarter-note beat? The last eighth note is shown in the music, so we really just “eye it in,” placing it ahead of the last eighth note where we feel the last beat would start.

## step 2: write the beat subdivision

Now that we know where the beats are, we can write in the **subdivision** (the breakdown of notes). In simple time, each beat breaks down into two components (eighth notes):



## step 3: fill in the rests

When we fill in the rests, we begin with the beats that have been started. In this example, each beat has already been started, so we'll start with the first beat. The first note is a sixteenth. We need to fill up the first eighth breakdown note, so we need to add a sixteenth rest, since two sixteenths make an eighth:



We've added a sixteenth rest, and now notice that the sixteenth note plus the sixteenth rest add up to equal the eighth breakdown beat.

Let's complete the first quarter note beat. We need to cover off that second eighth note breakdown beat. With what? An eighth rest:

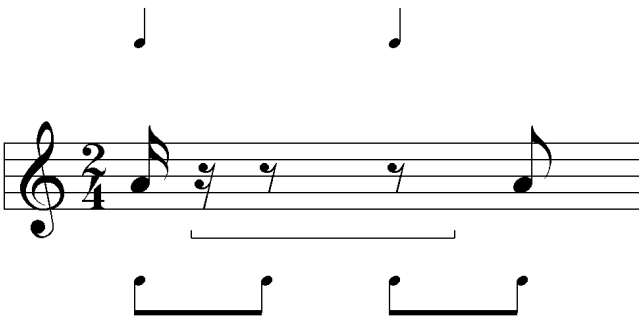
# measure completion

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Now we have completed a full quarter note beat with rests: one sixteenth note plus one sixteenth rest plus one eighth rest equals one full quarter note beat (which equals two eighth note breakdown notes).

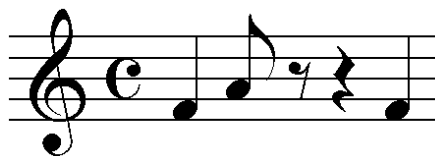
Look at the last beat now. The single eighth note shown is the last note in the bar. What will it take to complete this bar? An eighth rest. An eighth rest plus an eighth note equals a quarter note beat:



That's the completed bar of music. Can we take those two eighth rests in the middle and make a single quarter note rest? No. The rests for each beat must remain with each beat. One eighth is from the first beat, and the other is from the second beat. They have to remain separate. Leaving them separate makes the music easier to count, too.

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In longer bars, like a bar of 4/4 music, you can combine two rests, as long as you don't allow a rest to exist over the middle of the bar.



YES

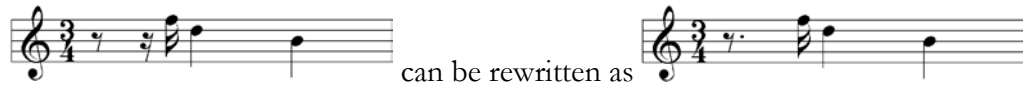


NO

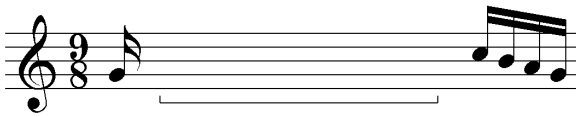
# measure completion

Can we combine the sixteenth and eighth rests from the first beat into a dotted eighth rest? Technically, no, although more and more we see publishers doing this sort of thing. The general rule about rests within a beat is this:

- If the rests are at the end of a beat, don't combine them (this is shown in the example above).
- If the rests are at the *start* of a beat, they can be combined:



Next example:



First step, is it simple or compound time? Compound. Why? The top number is evenly divisible by three. Since it's compound, we know that the top number is telling us the number of breakdown beats in each bar. Instead of writing in the beats first, as in simple time, we'll write in the breakdown notes:



Each set of three breakdown beats combines to give us our beats: the dotted quarter notes.



# measure completion

---

Notice that the last dotted quarter beat is placed just before the group of four sixteenths. That's because the four sixteenths make up one quarter note, and in this time signature, the beat is a dotted quarter. Therefore, the third beat actually begins somewhere before the sixteenths occur.

Now finish the bar by completing the beats that have been started. The first beat contains a sixteenth note. Finish off the breakdown beat by adding a sixteenth rest. Finish off the first beat by adding two eighth rests:

The image shows a musical staff in 3/8 time. The first beat contains a sixteenth note (G4) followed by a sixteenth rest. The second beat contains two eighth notes (G4 and A4). The third beat contains a dotted quarter note (G4) followed by a group of four sixteenth notes (A4, B4, C5, D5). Below the staff, three groups of eighth notes are shown: the first group has two eighth notes (G4 and A4), the second group has two eighth notes (G4 and A4), and the third group has two eighth notes (G4 and A4).

The last beat ends with four sixteenths. Those add up to a quarter. Add an eighth rest ahead of them to complete the last dotted quarter beat:

The image shows a musical staff in 3/8 time. The first beat contains a sixteenth note (G4) followed by a sixteenth rest. The second beat contains two eighth notes (G4 and A4). The third beat contains an eighth rest followed by a group of four sixteenth notes (A4, B4, C5, D5). Below the staff, three groups of eighth notes are shown: the first group has two eighth notes (G4 and A4), the second group has two eighth notes (G4 and A4), and the third group has two eighth notes (G4 and A4).

That leaves the middle dotted quarter beat. Finish this off by simply adding a dotted quarter rest:

The image shows a musical staff in 3/8 time. The first beat contains a sixteenth note (G4) followed by a sixteenth rest. The second beat contains a dotted quarter rest. The third beat contains a group of four sixteenth notes (A4, B4, C5, D5). Below the staff, three groups of eighth notes are shown: the first group has two eighth notes (G4 and A4), the second group has two eighth notes (G4 and A4), and the third group has two eighth notes (G4 and A4).

# glossary

**Sforzando:** To strongly accent a note.

**Subito:** Immediately.

**Alla breve:** Cut time (2/2).

**Tutti:** All instruments play.

## s u m m a r y

In this lesson, we applied our knowledge of simple and compound time signatures to completing measures.

We learned that there are three steps to completing measures: First, determine the type of time signature: simple or compound. Next, complete writing the beats above, and the breakdown notes below the measure. Finally, complete the measure with rests, starting with the beats that have been started.



## F A Q

1. Why are there rules about combining rests? What does it matter? After all, it's *silence!*

We have rules about combining rests to make the music as easy to read as possible.

2. Are beats and breakdown notes normally shown in music?

No, they are shown for instruction purposes only.

3. Can we combine rests in bars that have no notes at all?

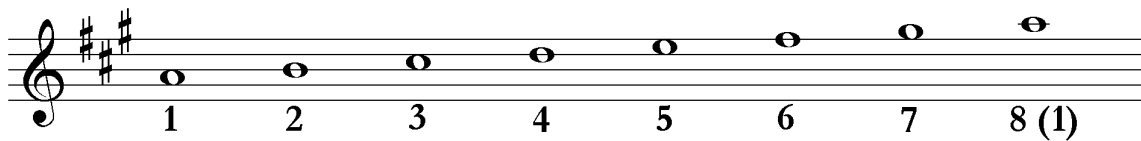
Actually, bars with no notes at all use the **whole rest**, no matter what the time signature is. We've learned that a whole rest has four beats. But it's also used to show a **whole measure** rest. So this is correct:



# lesson 15

In this lesson, we're going to learn all about tonic and dominant triads. Triads are chords. Chords are three or more notes that sound simultaneously. Triads, in particular, are three-note chords in which one note is called the **root**, another is the **third**, and the other note is the **fifth**.

A little review first. As you know, every scale degree has a technical name. Here is an A major scale with note numbers shown:



Here is the chart of technical names for each note number:

Note Number	Technical Name
1	Tonic
2	Supertonic
3	Mediant
4	Subdominant
5	Dominant
6	Submediant
7	Leading tone

We can refer to notes of a scale either by note number or by technical name. For example, A is note number 1 of an A major scale, or, by its technical name, it is the **tonic** note of an A major scale.

# tonic and dominant triads

We can build chords on each of the notes of a scale, and identify those chords by their technical name (i.e. the tonic chord, etc.).

Remember, a chord is any three or more notes sounding at the same time. A triad is a specific configuration of three notes. Here is the tonic note of the A major scale:



Let's build a **triad** on this tonic note. Triads are chords comprised of a **root**, a **third**, and a **fifth**. "A" is our root. The third is the third note of the scale, C#, and the fifth is the fifth note of the scale, E. We simply write the notes one on top of the other, like this:



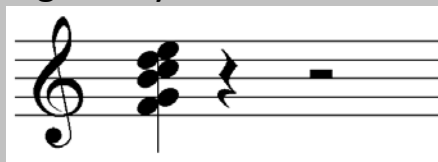
That is a three-note chord in which the bottom note (A) is root, the middle note (C#) is the third, and the top note (E) is the fifth.

**Any chord with the structure of root-third-fifth is called a triad.**

In the key of A major, we call the A major triad the tonic triad because it is built on the tonic note of the key. It is traditional to indicate the tonic triad by using a Roman numeral I, since the tonic note is the first note of the scale:



**DID YOU KNOW...** There are chords that include so many tones that we call them tone clusters. Tone clusters usually involve notes that are very close together, producing a very thick, dense sound. Here's an example:



---

# tonic and dominant triads

---

We can create tonic triads for any key. If we write a three-note chord comprised of the root, third, and fifth of a key, it's a tonic triad. Here are some tonic triads in various keys:

The image shows four musical staves, each representing a tonic triad in a different key. From left to right: 1. D-minor: A treble clef with a key signature of one flat (B-flat). The notes are D2, F3, and A3. Below the staff is the Roman numeral 'i'. 2. B-major: A treble clef with a key signature of two sharps (F# and C#). The notes are B2, D#3, and F#3. Below the staff is the Roman numeral 'I'. 3. F-minor: A treble clef with a key signature of two flats (B-flat and E-flat). The notes are F2, A-flat3, and C3. Below the staff is the Roman numeral 'i'. 4. D-major: A treble clef with a key signature of two sharps (F# and C#). The notes are D2, F#3, and A3. Below the staff is the Roman numeral 'I'.

Notice that when the key is minor, we use a **lower case i**. Each of the chords shown uses a structure of 1-3-5, or, root, third, fifth.

---

## dominant triads

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We build dominant triads much like we build tonic triads. Instead of starting on the tonic, we start on the dominant, and write a 1-3-5 triad. Here is the dominant triad in the key of A major:

The image shows a single musical staff in treble clef with a key signature of three sharps (F#, C#, G#). The notes are A2, C#3, and E3. The notes are labeled with Roman numerals: '1' for the root (A), '3' for the third (C#), and '5' for the fifth (E). Below the staff is the Roman numeral 'V'.

We use the Roman numeral V to indicate that this chord is based on the fifth, or dominant, degree of the scale. Notice that we make the chord in the same way as the tonic chord. We write notes a third and a fifth above the root of the dominant chord.

The dominant triad is very important in traditional harmony. When you hear a dominant triad, it often sounds as if it wants to proceed to a tonic chord. The reason for this is because the dominant triad contains the leading tone of the key.

In the dominant triad shown above, the third of the chord is G#. G# is the leading tone in the key of A. This leading tone sounds as though it *wants* to move to A. This is what makes the dominant triad so important in traditional harmony. The dominant triad helps to define the tonic chord because of the presence of the leading tone.

# tonic and dominant triads

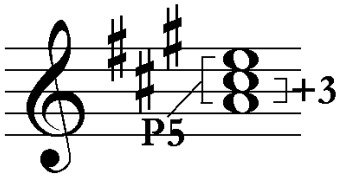


**REMEMBER:** The dominant chord is *always* a major chord. This is obvious when writing in a major key, but in the minor key, you must actually raise the third of the dominant chord in order to make it major. By raising the third, you create a leading tone to the tonic tone.

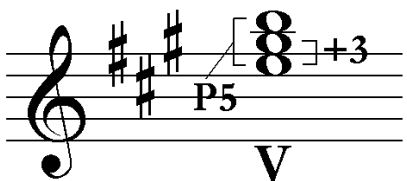
Let's have another look at the tonic triad in the key of A major:



We call this tonic triad a major triad because there is a major third between the root and the third, and a perfect fifth between the root and the fifth:

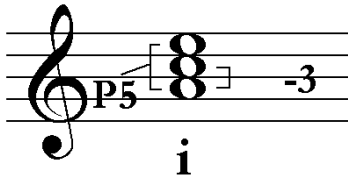


The dominant triad of A major is the E triad. This is a major triad as well, because there is a major third between the root and the third, and a perfect fifth between the root and the fifth:



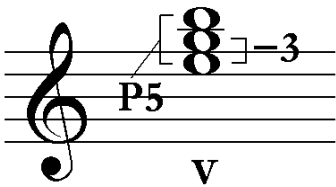
# tonic and dominant triads

That's fine for A major. But what if our piece of music were in A minor instead? Now we've got this for a tonic triad:



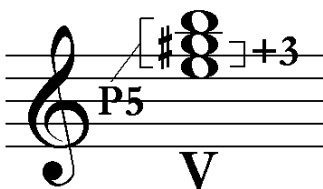
This is called a **minor triad**, because there is a minor third between the root and third, and a perfect fifth between the root and fifth.

Now, let's look at the dominant chord in the key of A minor—the E triad. Notice that the outer interval is still a perfect fifth. The inner interval is now a minor third, because we have no accidentals in our key signature. A to C is a minor third:



**Dominant triads must always be major.**

If they aren't naturally major, we must *make* them major. In our example above, we must change the E minor triad to an E major triad. How? By changing that minor third interval to a major third. How? By raising it a semitone. How? By using an accidental—a sharp:



Remember that rule: **Dominant triads must always be major.**

# tonic and dominant triads

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Here are some more dominant triads in various keys. Notice how the minor key dominant triads have raised thirds:

The image shows five dominant triads (V) in bass clef, each with its key signature indicated above it. The triads are: C-major (C-E-G), F#-minor (A-C#-E), B-major (B-D#-F#), F-minor (A-C-E), and D-major (D-F#-A). Each triad is represented by a chord symbol 'V' below the staff.

The reason for raising the third in the dominant triad of a minor chord is to create a leading tone (semitone) to the tonic. The video for this lesson demonstrates music with the raised seventh (i.e. a major dominant triad) and a natural seventh (i.e. a minor dominant triad) and you can certainly hear the difference. The major dominant triad solidly establishes the tonic triad.

# glossary

**Chord:** Three or more notes sounding together.

**Triad:** A three-note chord consisting of a root, 3<sup>rd</sup>, and 5<sup>th</sup>.

**Tranquillo:** Peacefully, with tranquility.

**Con fuoco:** With fire.

# s u m m a r y

In this lesson, we learned about chords and triads, specifically, the tonic and dominant triads. A triad is a three-note chord consisting of a root, a 3<sup>rd</sup>, and a 5<sup>th</sup>.

A triad based on the tonic note is called a **tonic triad**. A triad based on the dominant note is called a **dominant triad**.

We use Roman numerals to indicate triads. A tonic triad in a major key is labeled “I.” In a minor key, we use the lower case Roman numeral, “i.”

We learned how to identify major and minor triads. Major triads use a major third between the root and third, and a perfect fifth between the root and fifth. Minor triads use a minor third between the root and third, and a perfect fifth between the root and fifth.

In minor keys, the dominant triad is naturally minor. However, we always override this by making the dominant triad major. This is because of the rule: **Dominant triads must always be major**. A minor triad is made major by raising the third of the triad by one semitone. By raising the third, we are creating a leading tone, which is an important feature of dominant chords.



# tonic and dominant triads

---

## F A Q

### 1. There *must* be times when we can use a minor dominant chord, aren't there?

When a dominant chord is minor, it is not really considered to be **dominant**, because it is not fulfilling the **function** of a dominant chord, which is to establish the tonic, and therefore establish the key itself. There are times when the triad based on the fifth of the scale can be minor, but it is fulfilling some other theoretical function that is well beyond the scope of this lesson.

### 2. Can we put the notes of a triad in a different order? What if I wanted to move just the root of a tonic triad up an octave? Is it still a tonic triad?

Yes, you can rearrange triads, and yes, it is still a tonic triad. This is the subject of lesson 21 (wait for it!).

### 3. So major triads use upper case Roman numerals, and minor triads use lower case. What about diminished and augmented triads?

Diminished triads use lower case Roman numerals, and augmented use upper case.



# lesson 16

You're probably getting comfortable with key signatures, and major and minor keys. If not, just go back to previous lessons and refresh yourself with these concepts. If you haven't done all of the worksheets, *do them*. The more you do the exercises, the more comfortable you'll become.

In this lesson, we'll take a look at musical excerpts and determine what key they're in. We do this by looking at the key signature, and the accidentals used in the excerpt.

Take a look at this excerpt:



It's important to understand that the first and last notes of a piece do not necessarily establish the key, though they can be important in this regard.

What key is the excerpt in? There are three steps in key identification:

## step 1: establish the key signature

Notice that our excerpt has no sharps or flats in the key signature, but we can establish the key signature by checking the accidentals used. In this musical passage, there's a Bb at the end of the first bar. Because we know that Bb forms the key signature of either F major or D minor, we can move the Bb to the key signature area, like this:



Notice that key signatures are written before time signatures.

# key identification

We know the key signature for our excerpt: one flat. You'll recall from Lesson 12 that there are two possible keys for each key signature--one major and one minor. A key signature of one flat is either F major or D minor. How do we know which key our excerpt is in?

## step 2: look for a leading tone

The note that most strongly defines the key is the leading tone. The leading tone is the seventh note of the scale, and points to the tonic note. Here's a C major scale, showing the leading tone, B, and the tonic, C:



When you play this scale, you can hear that the B sounds very much like it wants to carry on to C--this is why it's called a **leading tone**.

So let's check for the presence of a leading tone. You can check for either major or minor first, but here's a tip--check for the minor key first. Why? Because a leading tone in the minor key will always be an accidental. Let's check this out.

In D minor, the key signature is one flat, Bb. The leading tone in D minor is C#. But C# does not occur in a natural D minor scale--only a C. The C# is added to give the leading tone to D. This C# is used in the dominant triad, A. (An A chord is comprised of A, C#, and E.)

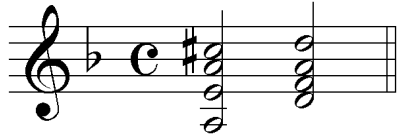
In Lesson 15, you learned that all dominant triads, regardless of major or minor key *must* be major chords, so that there is a leading tone to the tonic. That's why the C is changed to C# in D minor.

**DID YOU KNOW...** Beginning in the twentieth century, some composers began to experiment with a kind of music called "atonal" music that did not reside in a key. One of the first composers to try this style of writing was the Austrian composer Arnold Schoenberg (1887-1951).



# key identification

So, a dominant chord in D minor (A, C#, E) must have the # accidental in the music, because the key signature has one flat. There's no C# in the key signature:



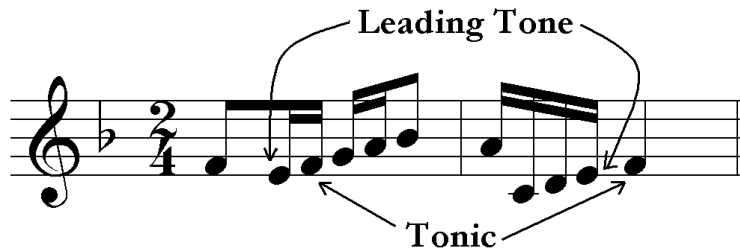
What good does it do to know this? When the key signature is one flat, you're looking for either F major or D minor. F major has no C#. D minor does (as a leading tone), so a C# will mean we're likely looking at D minor.

Let's return to our excerpt:



Checking for D minor first, we're looking for a C#, which would serve as a leading tone to D minor. There isn't one here. In fact, there's a C natural in the second bar. The absence of a leading tone to D minor tells us that this excerpt is likely not in the minor key.

What about F major? The leading tone to F is E. Are there any? Yes! There's one in each bar. Each E leads to an F:



Also, the E to F actually ends the piece. Based on the leading tones in this piece, we can say almost for certain that this piece is in F major.

There's only one more step now—and this is an important one:

## step 3: confirm it with your ears

Listen to the excerpt. If it's minor, it'll sound minor. If it's major, it'll sound major. Sometimes music can have lots of accidentals, so the best way to be sure is to simply use your ears.

## another example

Let's try it again with another example:



First step: Establish the key signature, noting the accidentals used. Make a list of accidentals used: G# and F#. Can we put these accidentals in order, resulting in a key signature? No. The first two sharp accidentals in a proper key signature are F# and C#. This example uses F# and G#. The memory aid for sharps tells us “Father Charles Goes...” So we’re missing a C#. In fact, the excerpt starts and ends on C natural. So we can’t make a key signature from this. So there's got to be another reason why these accidentals are here.

It's possible that even though we can't make sense of the G#, maybe the F# alone is the key signature here. E minor and G major use the key signature of F#. That's a problem here, because the excerpt uses G# in the first bar. G# is in neither E minor or G major. So that's not going to work.

Let's now consider the possibility that neither of these accidentals are going to form a key signature here, and that maybe there's another reason the F# and G# are there. Our excerpt shows no sharps and no flats. Which keys have no sharps and no flats? C major and A minor. Can we figure this excerpt in the key of either C major or A minor? Yes we can, because F# and G# are the raised sixth and raised seventh degrees of an A minor scale:



Assuming the key signature really has no sharps or flats, we proceed to step 2: Look for a leading tone.

We can account for the F# and G# accidentals by thinking of this excerpt in A minor. We also have C naturals and A in each bar of the excerpt. And don't forget, G# is the leading tone in the A minor scale. It seems that the excerpt is in A minor.

And what's the final step? Confirm it with your ears. Play it; listen to it. Does it *sound* minor? Yes.

This excerpt is also an example of music that starts and ends on C, yet is not in the key of C.

## another reason for accidentals

Try a tricky one:



Step 1, determine the key signature. There's two sharps in the signature, so this excerpt will be D major or B minor.

Step 2, check for a leading tone. Let's start with minor. The leading tone to B minor is A#. Does the excerpt have an A#? Yes. But notice that the A# is canceled right away in the next bar. The A# is serving as a **passing tone** between A and B. So the A# doesn't seem to have a leading tone function—it is simply ornamenting the line. If the writer of this excerpt were to give us A# instead of A-natural in the last bar, it would sound to our ears like B-minor. But the A-natural cancels out the leading tone to B-minor. Since the sharp is canceled right away, let's check for the major key instead. The last bar emphasizes D-major through the use of the C# leading tone. This excerpt is in D major.

Step 3, confirm it with your ears. Play it; listen to it. Does it *sound* major? Yes.

---

## reviewing the steps

Here are some excerpts. Check them carefully, and see if you can tell the reasons for each key designation.

**A Major:**



First, the key signature. It's three sharps, indicating either A major or F# minor. Second, checking for a leading tone in the minor key, we'd need to see an E#, which is the leading tone to F#. (Think about this carefully--we don't often see E#, but check it out on a piano. E# is a semitone above E natural, making it the leading tone to F#.) There are no E# notes. Now check for G#, the leading tone to A major. Yes, it's there, toward the end of the first bar. Third step, play it and listen to it. Sounds major, not minor.

# key identification

---

## C Minor:



The key signature is three flats, meaning Eb major or C minor. The leading tone for C minor is B natural. We need to see a B with a natural symbol (because Bb is in the key signature) in order for this to be C minor. There is one, in the third beat of the first bar. Play it—you'll hear the raised sixth and seventh notes (A natural and B natural), giving a definite C minor feel.

## F Minor:



The key signature of four flats indicates Ab major or F minor. The leading tone for F minor is E natural. There's an E natural in the first bar, and the piece ends on an E natural. This is therefore in F minor. Notice how leading tones in minor keys always have accidentals? You need an accidental because the minor key signature does not allow for a leading tone. For instance, in this example, the E is flat in the key signature, but needs to be made natural in order to be a leading tone. This example is minor—no need to check for major. Now, play it and listen to it. You'll hear it sounds like F minor.

## E Major:



The key signature of four sharps means either E major or C# minor. Check for minor first: we need a leading tone of B# to indicate C# minor. No B#'s in this piece, though. In fact, there are three B naturals. Check the leading tone to E major, which is D#. There are two of them, one in each bar, and each leads to E. This is definitely E major. Play it and confirm it with your ears.

# key identification

---

Bb Major:



Two flats means Bb major or G minor. G minor needs an F# for a leading tone. There's F natural, so this isn't G minor. Bb major needs A for a leading tone. There it is, in the last bar. Play it, and you'll see that this is Bb major.



**REMEMBER:** When trying to decide on the key, check for the existence of a leading tone in the minor key first. If none exists, then you are likely dealing with a major key.

# glossary

**Poco lento:** A little slower.

**Pomposo:** With majestic fervour.

**Legiero, Leggero:** Lightly.

**Piu adagio:** Slower.

# s u m m a r y

Determining the key of a piece means doing these three things:

1. Determine the key signature. If a key signature isn't given, check to see if the accidentals in the piece make a key signature.
2. Look for a leading tone. Start with the minor key leading tone. If it's there, you're in the minor key. If it's not there, you're in the major key.
3. Confirm it with your own ears. Play it. Listen to it. Let your ears confirm that you're in the major or minor key.



## key identification

---

# F A Q

**1. Let's say that I'm in the key of F, and I have a C# passing tone between C and D. Won't that look and sound like D minor?**

If one passing tone is used in this manner, you will notice that the piece still sounds like it is in the major key, because all of the other factors that point to major will more than offset this single accidental.

**2. When I check my music for leading tones, I see the leading tone for minor *and* the leading tone for major. What do I do?**

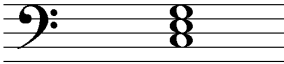
When you see a leading tone for minor, that means that it is in the minor key despite the presence of the major leading tone. In D minor, you'll see a C# for sure. But you'll also probably see E, too, which is the leading tone to F major. The presence of C# makes it D minor, because there is no C# in an F major scale.

**3. I've written a piece of music that sounds like A minor, not C major. But it doesn't use G# at all. Still, it definitely doesn't sound like C major. It even ends on A.**

You've likely written a piece of music in what's known as a **mode**, which is a very interesting type of scale that we cover in Lesson 23.

# lesson 17

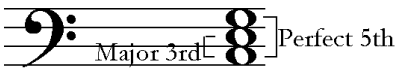
In Lesson 15, you learned all about tonic and dominant triads. You learned that a triad is a three-note chord in which there exists a root, third, and fifth. Here is a C triad, made up of the notes C, E, and G:



The note C is the **root** of the triad. E is the third, and G is the fifth, because if we start on the bottom note and count upward, the count for E is three, and the count for G is five. This triad is called a **major triad**. Here's why: In each triad there are two intervals to consider:

1. The outer interval (i.e. bottom note to top note)
2. The bottom interval (i.e. bottom note to middle note)

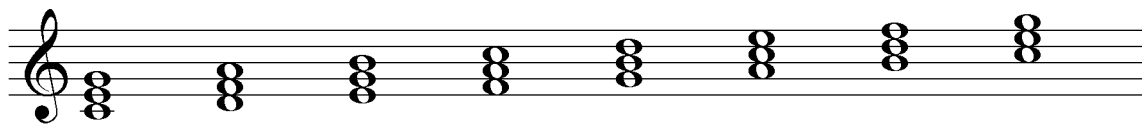
The outer interval in our C chord is C to G. That's a fifth. What kind? Remember the question: Is the upper note in the major scale of the bottom note? The answer is yes, so this is a perfect fifth. The bottom interval is a third. Is there an E in a C major scale? Yes, so this is a major third.



A triad in which the outer interval is a perfect fifth, and the bottom interval is a major third, is a **major triad**.

In this lesson, you'll learn that you can build triads on *any* note of a scale.

Here is the C major scale, with every note operating as the root of a triad:



We've taken each note of the scale and built a triad in 1, 3, 5 fashion.

**There are four kinds of triads: major, minor, diminished, and augmented.** We've already explored the major triad. In the key of C, the triad built on C, the tonic, is major. We'll look at each triad and see what kind it is.

The next chord shown is built on D, the supertonic. First check the outer interval, D to A. That's a perfect fifth. Now the bottom interval, D to F. That's a minor third. A triad with a perfect fifth and a minor third is called a **minor triad**.

Next triad, E, G, and B. E to B is a perfect fifth, E to G is a minor third. That makes this one minor as well.

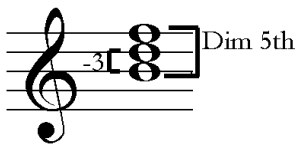
Next, F, A, C. F to C is a perfect fifth. F to A is a major third. This is a major triad.

Play these chords and intervals on a keyboard. Notice the difference in sound between major and minor chords.

Next triad is built on G. G to D is a perfect fifth. G to B is a major third. This is a major triad.

Next, the triad built on A. A to E is a perfect fifth. A to C is a minor third. This is a minor triad.

The triad built on the seventh note is different. The notes of this triad are B, D, and F:



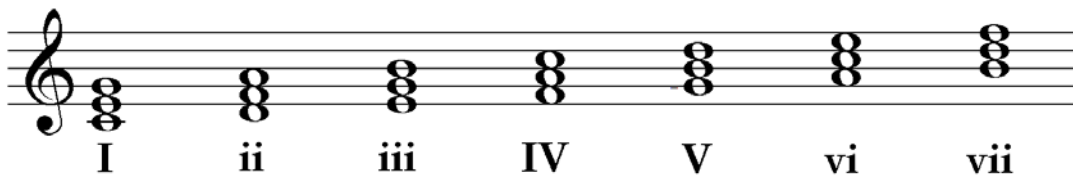
Checking the outer interval, is there an F in a B major scale? No, there's an F#. B to F is a smaller interval, so it's a diminished fifth. Bottom interval, B to D, is a minor third. A triad with an outer interval of a diminished fifth, and a bottom interval of a minor third, is a **diminished triad**. Play the diminished triad on a keyboard, and you will hear that its sound quality is quite different from a minor or major triad.

We've now gone through all the triads of the C major scale. And this procedure applies to any major scales. In *any* major scale, the triad based on the tonic will *always* be major. The triad based on the supertonic will *always* be minor, and so on, as shown in this table:

In major keys...		
Note number	Technical name	Triad quality
1	Tonic	major
2	Supertonic	minor
3	Mediant	minor
4	Subdominant	major
5	Dominant	major
6	Submediant	minor
7	Leading Tone	diminished

## roman numerals

We use Roman numerals to identify triads. We use the Roman numeral I to identify the triad based on the tonic note of the scale. And we use the upper case (I) because it's major. Minor triads are identified with lower case Roman numerals. Here are the numbered triads of the C major scale:



We now have a new way to identify chords. In C major, we identify the chord based on the tonic as a I-chord (pronounced, “one-chord”). The chord based on the supertonic is a ii-chord (“two-chord”). The mediant chord is a iii-chord, and so on. So if someone asks you to play a vi-chord in the key of C major, what will you play? An A minor chord (as you can see from the graphic above).

Based on this, what is the I-chord in the key of G major? A G major triad. What is the I-chord in the key of B major? A B major triad.

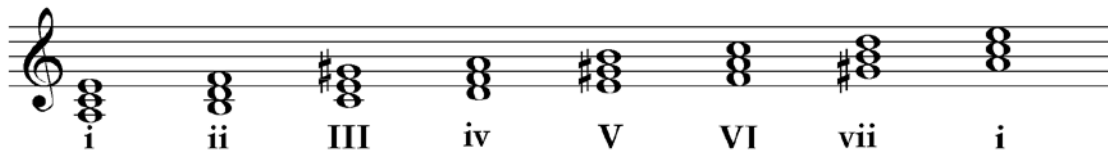


**REMEMBER:** To figure out the Roman numeral of a triad, write the notes used in the triad. In this lesson, the bottom note indicates the Roman numeral. So, if the bottom note is the sixth note of the key (scale), the chord is a vi-chord.

## minor keys

What we did with the major scale, we can do with the minor as well.

We can take each note of the minor scale and build triads. Here are triads built upon an A harmonic minor scale. You will recall that the harmonic minor uses a raised seventh note. We're using this example because the triad based upon the third note is an augmented triad. Here is the scale with triads:



Notice the third triad. The outer interval, C to G# is an augmented fifth (remember that C to G is a perfect fifth). The bottom interval is a major third (C to E). And we use upper case (III) to signify augmented.



Here's a summary of the four types of triads.

Triad	Description
Major	Outer interval perfect 5 <sup>th</sup> , bottom interval major 3 <sup>rd</sup> .
Minor	Outer interval perfect 5 <sup>th</sup> , bottom interval minor 3 <sup>rd</sup> .
Diminished	Outer interval diminished 5 <sup>th</sup> , bottom interval minor 3 <sup>rd</sup> .
Augmented	Outer interval augmented 5 <sup>th</sup> , bottom interval major 3 <sup>rd</sup> .

Some musicians customarily use the symbol ° to indicate diminished chords (as in vii°) and a + symbol to indicate augmented (as in III<sup>+</sup>). We do not use these symbols in this course. The FAQ question 1 below has more on this. In the worksheets, however, you will be required to indicate the quality of a triad by using these symbols as an exercise, but not in normal musical practice.

# glossary

**Canon:** A round.

**Con spirito:** With spirit.

**Allegro con molto spirito:** Quickly, with much spirit.

**Ben marcato:** Well accented.

# s u m m a r y

In this lesson, we learned that we can take all notes of a scale and build triads on them. A triad is comprised of a root, a third, and a fifth. A third is the third note above the root, and a fifth is the fifth note above the root.

We also learned that each triad will be major, minor, diminished, or augmented.

We use Roman numerals to identify triads. A I-chord refers to the chord based on the tonic of a major scale. A ii-chord refers to the supertonic, and so on. We use upper case Roman numerals to show major and augmented chords, and we use lower case to show minor and diminished.



## F A Q

**1. By looking at a chord marked III, how can I know if we're dealing with a major chord or augmented chord?**

By knowing the key you're in. III chords are not major in the major key. In the natural minor, they are major. In the harmonic and melodic minor, they are augmented. The ii-chord is minor if you're in a major key, and it's diminished if you're in a harmonic or natural minor key.

**2. What if I'm in the key of C major and I *want* to use a chord that's not found in the key of C major. What if I want to use an Eb major chord while in C major?**

Of course you can use such a chord. There are no limits—only your imagination. But what would you call this chord? It's a complex subject, but the short answer is that the name of the chord has to do with its **function** in the context of your piece of music. One possible answer is that it's a “flat-III-chord” (since Eb is the flattened third note of a C major scale).

**3. If the key changes in the middle of a piece of music, say from the key of C to the key of F, is F a I-chord, or a IV-chord?**

Before the key change, F is a IV-chord in the key of C. After the key change, F is considered to be the tonic of the new key, so it's I (and the C triad, by the way, is a V-chord in the new key). If you're having trouble visualizing this, look at the triad scale based on C major earlier in this lesson. Then draw your own scale of triads based on F major. Things will become clearer as you study your F scale triads.



# lesson 18

Sometimes music needs to sound higher or lower, but we don't want to change the key. We can do this by moving music **up an octave**, making it sound higher. Or, we can move it **down one octave**, making it sound lower. In both cases, the letter names you use are the same as the original melody--they're simply an octave higher or lower.

Changing the pitch of music this way is called **octave transposition**.

To **transpose** music means to change the pitch of each note without changing the relationships between the notes. Often, when the pitch of each note is changed, this transposition results in a change of key; this is called **key transposition**. But when the pitch of each note is changed by one octave, the key stays the same and this is **octave transposition**.

Let's be clear--when you change a melody by one octave, it will sound the same, except that it will be a higher or lower pitched version of the original.

## transposing up one octave

Play a simple melody on a piano or keyboard. Now, locate the same starting note one octave higher, and play it again. You've just performed an octave transposition!

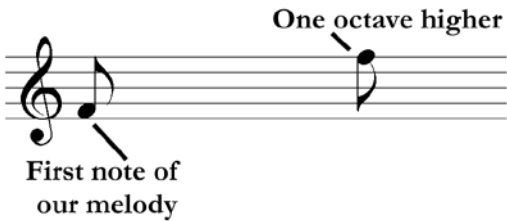
Let's transpose a melody up one octave. Take a look at this one:



# octave transposition

The first note of this melody is F. The leading tone to F suggests that this piece is in F major (not to mention it ends on F, too).

Take the first note, F, and find the next F that is higher. This will be the F that is eight notes, or one octave, higher:



Now, continue by moving each note of the melody up one octave. Here is the result:



All of the notes are the “same” but they are now an octave higher. Notice, since we’ve moved the notes up past the middle line, the stem direction has changed.

Let's review what we've done.

All we did was take the original melody, and we moved every note up one octave. So the F became F an octave higher, G became G an octave higher, and so on. And we stayed in the same key, too, because changing notes by an octave does not change the key. You can hear this melody played in the video lesson. One simply sounds higher than the other, right?



## DID YOU KNOW...

Sometimes a composer will write “8ve” or “8va” above a passage of music. This means that they want the music to be performed one octave higher than the written notes. The symbol “8va bassa” means to perform the music one octave lower than written.

# octave transposition

## transposing down one octave

Now we'll transpose a melody down one octave. Again, we know the key doesn't change, because we're moving by an octave. The process is exactly the same, except that with each note, we'll count *down* eight notes.

Here's our original melody:



And here's what the melody looks like transposed down one octave:



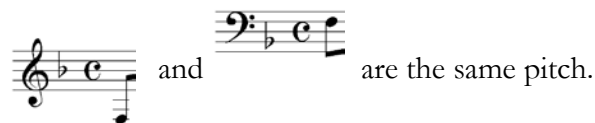
As you can see, this version of the melody uses a lot of leger lines. But we can take that melody and place it in the bass clef, eliminating the need for leger lines.

Returning to the original melody, moving each note down an octave, using the bass clef staff, gives this result:



It's octave transposition, so the key is the same. We've moved each note of the melody down one octave, using the bass clef. And notice how we've made sure the stem directions are correct.

By the way, you can see as well that the first notes of our transposition:



**REMEMBER:** When you transpose a melody by an octave, the letter names will be the same as in the original melody. The only difference will be that the melody will be in a different octave.



# glossary

**Transpose:** To move all pitches up or down by the same number of notes.

**Octave:** An interval of eight notes.

**Scherzo:** Playful composition.

**Scerzando:** To play an instrument in a playful or joking manner.

## s u m m a r y

What have we learned about **octave transposition**? You can move a melody up or down by one octave, and by doing so, it will just sound like a higher or lower version of the original melody. And, the key and letter names will stay the same.



## octave transposition

---

# F A Q

### How can I make use of octave transposition?

Octave transposition is very handy for creating parts for instruments from other instruments' parts. For instance, you can take a trombone solo, transpose it up one octave, and play it on a trumpet. Without octave transposition, the part may be too low.

# lesson 19

This lesson requires a solid grounding in time signatures. Therefore, you may want to re-read Lesson 13.

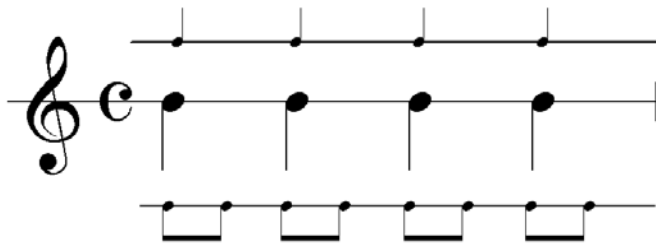
Figuring out how to write triplets and other tuplets (odd groupings of notes) can be an exercise in futility! Beyond triplets, there does not seem to be a hard and fast agreement from editor to editor on how tuplets should look in any given situation:

From the concise oxford dictionary of music, 3<sup>rd</sup> ed. (Michael Kennedy), p.322:

*“Various other combinations are possible, and it is hardly possible to list them or to lay down rules. When a regular combination occurs the performer should observe the other notes of the measure, and he will quickly realize into what fraction of the measure the irregular grouping is to be fitted.”*

## the triplet

You know that simple time signatures tell us the number of beats and each bar. For example, here is a bar of music in 4/4 time (“common time”). We’re not dealing with pitches here, just rhythm, so we’re using a one-line staff:



Now, we know that simple time signatures tell us the number of beats in each bar. Common time refers to 4/4 time, in which the top number tells us the number of beats in each bar,

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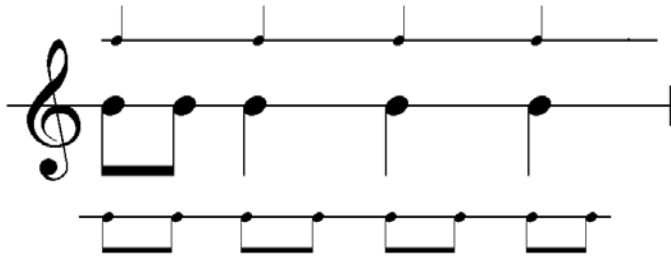
## triplets and other odd groupings

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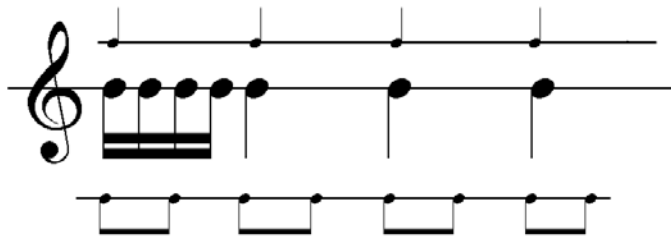
and the bottom number tells us that the beat unit is the quarter note. You also know that each beat unit can subdivide into two smaller units.

Notice that we've placed the quarter notes across the top, and eight notes along the bottom, to show where the beats and subdivided beats are.

Let's change our rhythm. We'll change the first beat, from a quarter note to two eighth notes:

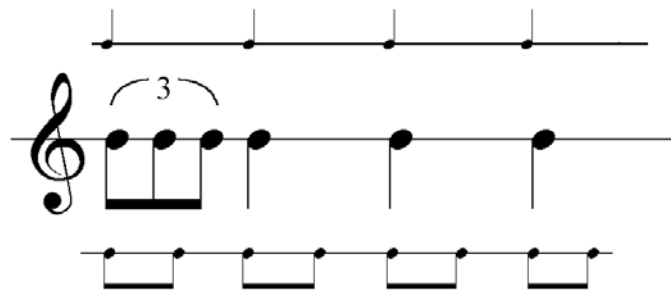


Now we've got two notes spread evenly across the first beat. We can also take the two eighth notes and break them down into four sixteenth notes, like this:



this, of course, has been covered in previous lessons. What we want is to take *three* notes and spread and evenly across one beat. Do we have a note value that accomplishes this?

Yes we do. It's called a triplet, and it looks like this:



We've placed three eighth notes where we would normally see two. How do we make it fit? By placing a "3" underneath it, with a small slur, as shown. Sometimes, a bracket is used instead of a slur; they mean the same thing.

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## triplets and other odd groupings

---

The “3” indicates that the three notes are to be spread evenly across the beat so that the three notes are equal in duration. Here is another example of music that uses a triplet:



In music where the quarter note gets the beat (as in  $\frac{2}{4}$ ,  $\frac{4}{4}$ , or common time), triplets that take up *one* beat are called *eighth note triplets*. They occupy the space that two eighth notes would normally occupy.

Remember this important rule about triplets:

Triplets occupy the same space that two notes of that value would normally occupy.

Notice, in the last example, the triplets occupy the same space and that two eighth notes would normally occupy. Now look at this excerpt. It shows a triplet, but it's made up of quarter notes, not eighth notes:



If you apply the rule above (triplets occupy the same space that two notes of that value would normally occupy), you would conclude correctly that the quarter note triplet is two beats long. That's because two quarter notes equal two beats. You can hear what this example sounds like in the video lesson.

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## other “odd groupings”

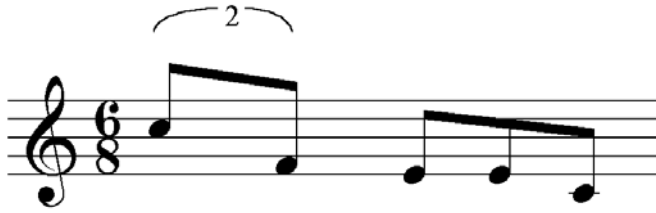
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What about other “odd groupings”? We now know about three notes over two. Now check out in this example:



Here we have five 16<sup>th</sup> notes where we would normally have four.

Now, let's look at an example in compound time,  $\frac{6}{8}$ :



What makes the pair of eighths a tuplet is that there are two notes where you'd expect to find three. This tuplet is actually called a "duplet".

Just remember, whenever you have an odd grouping, make sure you write the number above the grouping, as shown. As mentioned before, it doesn't matter if you use a bracket or a slur – both are acceptable.

---

## filling in the missing tuplet

Completing a bar with a tuplet figure simply requires following a short series of steps. Consider the following example:



Here are the two steps we go through to figure out the basic time value of the six notes we need:

1. What is the duration of the missing beat? (Answer in this case: one quarter note)
2. The required tuplet is a group of six (look at the example). What *standard* grouping of

notes is *smaller* than six in common time,  $\frac{4}{4}$ ? Five? No, that's not a standard grouping. Four? Yes! What group of four fits? Sixteenth notes, of course. That's the value of your tuplet! Here it is:

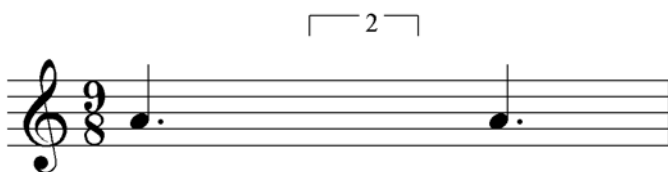


## triplets and other odd groupings

---

Notice that we've used a bracket here instead of a slur. It's your choice.

Figuring out tuplets in compound time is very similar. Check out this example:



Let's go through the steps:

1. What is the duration of the missing tuplet? It is one dotted quarter-note long.
2. What standard grouping of notes fits the missing tuplet? Three eighth notes. So the tuplet will be made up of 2 eighths.

The truth of the matter is that publishers of music will ultimately put any time value they wish, and the discrepancies abound for compound time! Their reasoning goes like this: anyone can tell that the empty spot is one dotted quarter (in the case of the example above), so just play the two notes evenly across the beat - it doesn't really matter what kind they are. Sometimes you'll see, for example, a '9'-figure, using sixteenths, and then you'll see the same figure in another score using thirty-seconds. The result is the same – they want nine notes played across the applicable beat.

# glossary

**Triplet:** Three notes spread across where two such notes would normally be found.

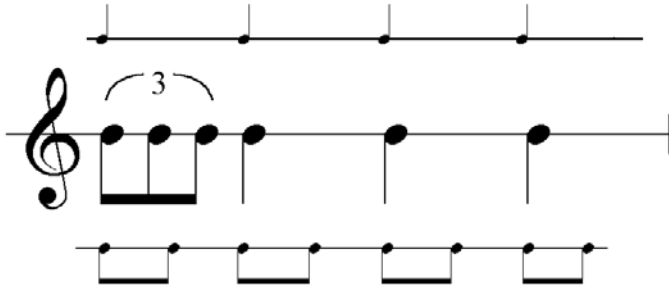
**Allegro energico:** Quickly, with energy.

**Con amore:** With warmth and feeling.

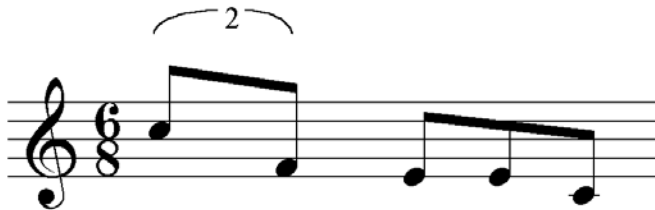
**Andantino:** A little quicker than andante.

# s u m m a r y

In this lesson, we learned some new rhythms. In simple time, we've learned about the triplet, three notes spread across where we would normally have two notes of that value.



In compound time, we learned about the *duplet*, two notes spread across where we would normally have three notes of that value.



We also learned that tuplets can be comprised of any number of notes. We must make sure that we write the number above the note grouping, and use a bracket or a slur.





**1. Can I have a tuplet spread over more than one beat? For example, can I have a tuplet of three half notes spread over a bar that would normally have two half notes?**

Yes, this is commonly done, and if you look at the steps shown in this lesson, you'll see that it is quite easy to do.

**2. Can I spread a tuplet over more than one bar?**

Yes, theoretically. But as you can imagine, it is not normally seen. Try writing this yourself, and you will probably see that there are other ways to notate this rather than the way you describe.

# lesson 20

In Lesson 18, we learned how to transpose music up and down one octave. And we also learned how to transpose by octave into another clef.

When transposing by octave, the key doesn't change. But transposing by an interval less than an octave requires us to change the key. This is called **key transposition**.

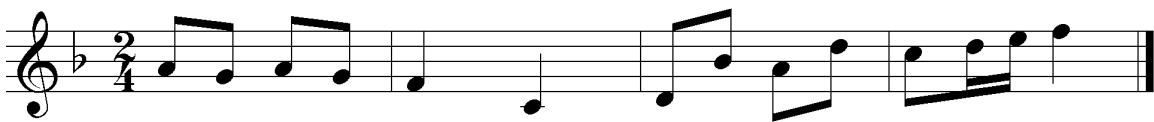
Look at the following short musical excerpt:



It's in G major. We know this because there's an F-sharp in the key signature, and there are no D sharps to indicate a leading tone to E Minor. If this is not clear, you will want to re-read Lesson 16 (Key Identification).

Play the melody several times. (You can also hear it played in the video lesson.)

Now look at this example:



Play it a few times. (You can also hear it played in the video lesson.)

# key transposition

---

At first glance, it seems like the same melody, but it *is* different. What have we done? We've moved the entire melody down one step, to a new key.

The first melody was in the key of G major. We've taken the entire melody and moved it down one whole step, to the key of F major. Let's explore how this is done.

There are three methods you can use to transpose melodies. We're going to use all three to transpose our melody from G major to F major.

To transpose a melody, the first step is the same regardless of what method we use: draw the clef, new key signature, and time signature on the staff:



Now for the three methods:

---

## method 1: transposing by technical name

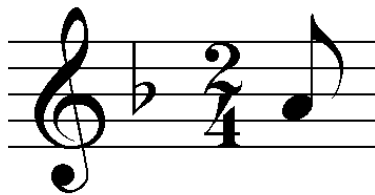
When transposing using this method, the technical names, or scale degrees (tonic, supertonic, mediant, etc.) remain the same. If the melody starts on the tonic of the original key, it will start on the tonic of the new key too. And if it ends on the submediant of the original key, it will end on the submediant of the new key.

Our original melody starts on B. B is the **mediant** note in the key of G major. What's the mediant note of F major? A.



The mediant:

in G major transposed down one step becomes



the mediant

in F major.

# key transposition

---

The second note in the original melody is A. That's the supertonic note in the key of G major. What's the supertonic note in the key of F major? G.

You can proceed through the whole melody in this way. Determine the technical name of each note, and draw the same technical note in the new key.

## method 2: transposing by harmonic interval

In transposing by harmonic interval, we determine the interval between the original and the new key. You know that the original key of our melody is G major, and the new key is F major. The interval between G and F is a major second:



Therefore, *all* of the notes in the new melody will be a major second lower than the notes in the original melody. What's a whole tone lower than G? F. What's a whole tone lower than D? C.

Take the original notes:



and draw them a major second lower:



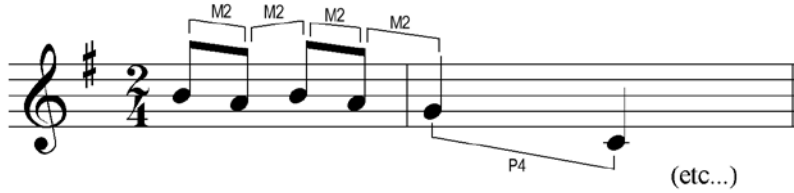
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## method 3: transposing by melodic interval

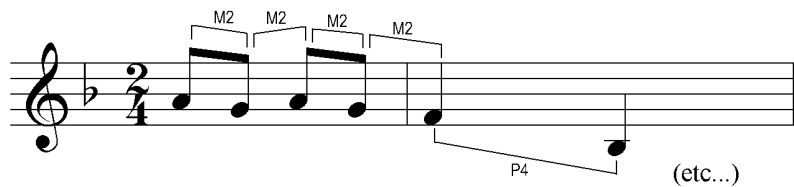
This method involves taking the original melody and determining the intervals between each successive note. In our melody, the melodic interval from B to A is a major 2<sup>nd</sup>. Here are the melodic intervals of the first two measures:

## key transposition

---



Now, determine the first note of the new, transposed melody by using method 1 or 2. Once you've determined that A is the starting note, apply the intervals from the original melody, like this:



Now, you don't have to use all three methods, of course. You may find it easier to just use one method, or you can switch methods as you go. Use whatever methods you're most comfortable with.

---

## value keys or atonal music

Sometimes music can sound like its tonal centre is vague. This can happen when lots of accidentals (sharps and flats) are used. Or music can be **atonal**. An atonal melody does not sound like it has a tonal centre. In other words, an atonal melody does not sound like it is associated with a particular key. Again, you can often expect atonal melodies to contain lots of accidentals.

Look at this excerpt:



# key transposition

---

You might think that since the key signature has no sharps and flats, it is therefore in C major or A minor. But the accidentals used in this piece cannot be explained by either of those keys. And if you play this melody, you'll hear that it is not in C major or A minor.

The lack of tonal centre suggests that this melody is **atonal**. Because it is atonal, we can't transpose it from the current key to, say, Eb major, because it's not in a key to begin with!

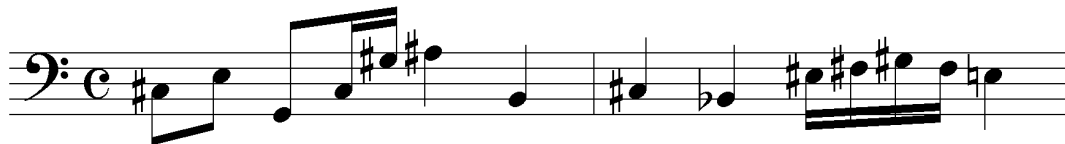
Since the key is irrelevant, we won't be transposing it to a new key. We will instead transpose it by a certain interval. Let's transpose it up a major third. The first note is A. A major third above A is C#:



We can continue using the same method, transposing every note up a major third. You can check your work by using the other methods, by harmonic interval, and by melodic interval. For example, using method 3 (melodic interval), we know that the second note is a minor third above the first note. So the second note in the new melody will be a minor third above C#, which is E.

The third note in the original melody is Eb. Using method 2 (harmonic interval), that's a minor sixth lower than the preceding note. A minor sixth lower than E in our new melody is G.

Here is the atonal melody, transposed up a major third:



# glossary

**Triplet:** Three notes spread across where two such notes would normally be found.

**Allegro energico:** Quickly, with energy.

**Con amore:** With warmth and feeling.

**Andantino:** A little quicker than andante.

# s u m m a r y

We've learned that melodies can be transposed by intervals less than an octave. Transposing by intervals less than an octave results in a key change.

**There are three methods that can be used to transpose melodies:**

**Method 1, by scale degree**, in which the technical name or scale degree is used to determine the notes in the new melody;

**Method 2, by harmonic interval**, in which the interval between the tonic notes of the two keys is used to determine the notes of the new melody; and

**Method 3, by melodic interval**, in which the melodic interval between each note of the original melody is used to determine the notes of the new melody.

Atonal melodies, or melodies with little or no tonal centre, are transposed by harmonic interval or melodic interval. We can't use method 1 because an atonal melody is not written in a particular key, and so the notes have no technical names.



## key transposition

---

# F A Q

**1. I have a melody that is written for flute, a C instrument. I want to play it on a Bb Clarinet? Which direction to I transpose, up or down?**

Bb instruments sounds a Bb when they play a C. That's a whole tone lower. In order to match up with the C on the flute, the Bb instrument must play a whole tone *higher*, which is D. So you'll need to take your flute melody and transpose it *up* a whole tone.

**2. I'm trying to sing a melody that is way too high for my voice. What do I do?**

Here's one way to fix the problem:

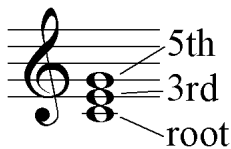
- a. Determine the highest note you can sing (and still sound good!).
- b. Find the highest note in your written music.
- c. Determine the interval between your own highest note, and the highest note in the piece.
- d. Transpose down by the interval you determined in step c above.

Don't forget, *all* instruments will need to transpose by the same interval!

# lesson 21

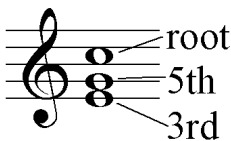
You have already learned about triads. In Lesson 15, you learned that a triad is a three-note chord in which there is a root, a third, and a fifth. In Lesson 17, you learned that there are four kinds of triads: major, minor, augmented, and diminished. If you feel you need to review, go back to Lesson 15 and 17 and re-read them before continuing with this lesson.

In all of the triads you have seen so far, the root has been on the bottom, the third in the middle, and the fifth on top, like this C major triad:



We say that this triad is in **root position** because the root of the chord is on the bottom. In the key of C major, the chord based on C (shown above) is a I-chord in root position.

But what if we wanted another note of the chord to be on the bottom? Suppose we wanted the note E on the bottom. It's simple. Just move the C up one octave, so that it's no longer the note on the bottom:



# triad inversions

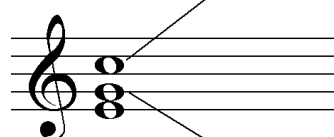
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We call this new chord a I-chord because it still has the notes of the I-chord in C major: C, E, and G. But it's different. The root is no longer on the bottom. Now the third is on the bottom. We need a way to distinguish between these two chords, even though they use the same notes.

We identify the new chord by noting the intervals between the bottom and top note, and the bottom and middle note. The interval between the bottom and top note is a sixth (count it and see). The interval from the bottom to the middle note is a third.

We call the chord a  $I_3^6$  chord. Here is why:

This note is  
6 notes above the  
bottom note.



$I_3^6$  This note is  
3 notes above the  
bottom note.

This  $I_3^6$  chord is also called an **inverted** chord, because we have moved the bottom note to the top.

Back to our original root position chord. Using the same counting method, we could call it a  $I_3^5$  chord:



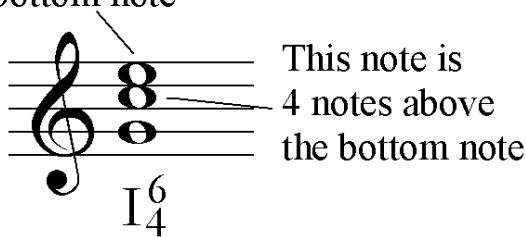
5th  
3rd

$I_3^5$

# triad inversions

We can also invert the chord by placing the fifth on the bottom. To do this we move the root and the third up an octave, leaving the fifth on the bottom, like this:

This note is  
6 notes above  
the bottom note



We call this a  $I_4^6$  chord, because the top note is a fifth above the bottom, and the middle note is a fourth above the bottom. It is still a I-chord because it uses the notes of a I-chord. But it is different because it has the fifth of the chord on the bottom.

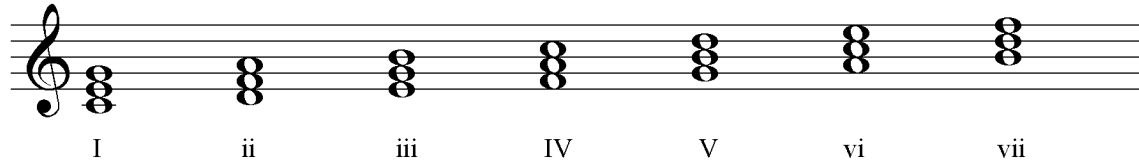
We call these different chords **inversions**. When we have a chord with the **third** on the bottom, we call it a **first inversion triad**. When the fifth is on the bottom, we call it a **second inversion triad**. So we've covered three types of chords: root position, first inversion, and second inversion.

These three triads give us great variety in music. Notice, in the video lesson, how each chord type sounds a bit different.

One other thing about inversions. When we note chord inversions, we use simply 'I' instead of  $I_3^5$ . In root position, the 5 and 3 are assumed to be there. And we use  $I_6$  instead of  $I_3^6$ . The 3 is assumed to be there.

# triad inversions

Here is a C major scale, with triads built upon each note, giving a scale of root position triads:

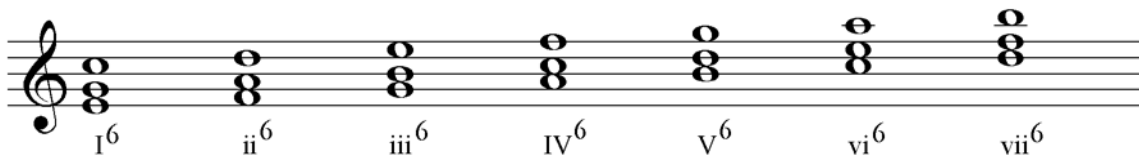


I      ii      iii      IV      V      vi      vii



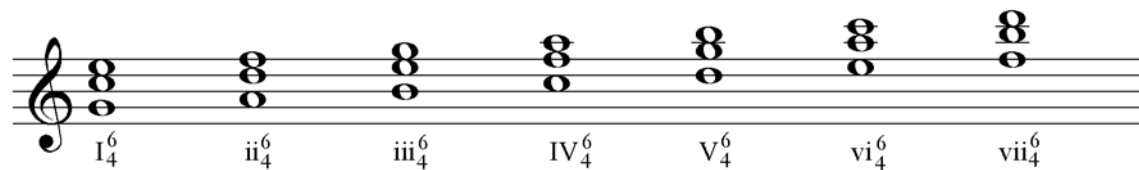
**REMEMBER:** We use upper case Roman numerals for major and augmented triads, and we use lower case for minor and diminished.

Now, here is a scale of triads in first inversion. Notice the third of the triad is now on the bottom (the root is now on top). Also notice how the '3' is not used in the designation.



I<sup>6</sup>      ii<sup>6</sup>      iii<sup>6</sup>      IV<sup>6</sup>      V<sup>6</sup>      vi<sup>6</sup>      vii<sup>6</sup>

And here is a scale of triads in second inversion:



I<sub>4</sub><sup>6</sup>      ii<sub>4</sub><sup>6</sup>      iii<sub>4</sub><sup>6</sup>      IV<sub>4</sub><sup>6</sup>      V<sub>4</sub><sup>6</sup>      vi<sub>4</sub><sup>6</sup>      vii<sub>4</sub><sup>6</sup>

Play each series of triads on a keyboard instrument. Get used to the characteristic sound of each type of triad: the root position, the first inversion, and the second inversion.

# triad inversions

---



A quick mini review!

- A **root position** triad is a triad with the root on the bottom. It uses the Roman numeral, with no numbers after it:



vi

- A **first inversion** triad has the third on the bottom. It uses a Roman numeral with a small superscript 6 after it:



vi<sup>6</sup>

- A **second inversion** triad has the fifth on the bottom. It uses a Roman numeral with a small 6 and 4 after it:

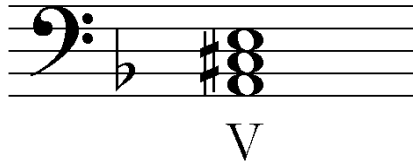


vi<sup>6</sup><sub>4</sub>

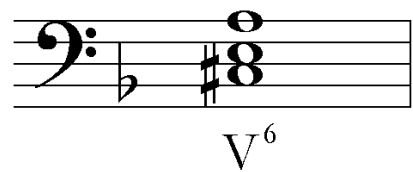
# triad inversions

## minor key triad inversions

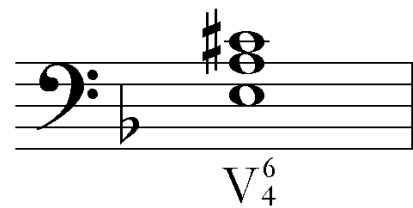
We can invert triads in the minor key too. Let's work with a V-chord in the key of D minor, (one flat). Here is the root position chord:



(Don't forget, all dominant triads are major, so we make the C sharp here.) Now, here is the first inversion chord:



And here is the second inversion:



# triad inversions

Here are some triads with their “Roman numeral analysis.” Study each one. Play it, and be certain that you understand how each one has been analyzed.

The first triad, for example, is from the key of G major. The analysis says that it is a V-chord in second inversion. The fifth degree of the G major scale is D. The D triad (from the bottom) is D, F#, and A. In second inversion, it’s A, D, and F#. And that is exactly what we see. Study all of the triads in this manner.

Key: G-major      F-minor      A-major      E-minor

$V_4^6$        $ii^6$       IV       $VI^6$

Key: B-flat major      E-major      E-flat major      D-minor

$iii_4^6$        $I_4^6$        $V^6$       V

Another point about inversions. All of the examples we have been working with have used **closed spacing**. That means that all of the tones are within an octave of each other. But it is possible to spread out the notes into different octaves (**open spacing**). Though the notes are spread out, it does not change what you have learned: when the third is on the bottom, it’s a first inversion triad, and when the fifth is on the bottom, it’s a second inversion triad.

For example, here are three second inversion triads. They look different, but they are all second inversion because the fifth is on the bottom:

$I_4^6$        $I_4^6$        $I_4^6$

# glossary

**Da Capo:** "The top," abbreviated: D.C., from the beginning.

**Dal segno:** "To the sign," abbreviated: D.S., go back in the music to the sign.

**Giocoso:** Playfully.

**Finale:** Last movement of a work.

## summary

In this lesson, we learned all about triad inversions. We learned that a triad in root position has its root on the bottom, with the third and fifth above. A triad in first inversion has the third on the bottom, with the fifth and root above. And a triad in second inversion has the fifth on the bottom with the root and third above.

First inversion triads use a small 6 after the Roman numeral, while second inversion triads use a small 6 and 4 after the Roman numeral, like this:

I<sup>6</sup> and I<sup>6</sup><sub>4</sub>

A root position chord has notes a fifth and a third above the bottom, but the 5 and 3 are not customarily used. The designation of “I”, with no numbers after it, is used instead.

We also learned that chords in the minor key can be inverted as well.

And finally, we learned that when all the notes of a chord are within an octave, this is called **closed spacing**. Chords that span more than an octave are called **open spacing**. The spacing does not affect the inversion of a triad. The bottom note of the chord determines the inversion.



## triad inversions

# F A Q

### 1. In guitar chord charts, I sometimes see chords like A/C#, or D/A. Are these inversions?

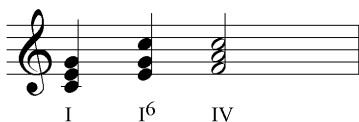
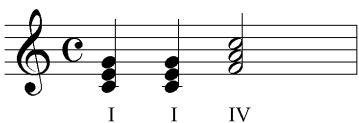
Yes. This is one way of indicating inversions to a band using chord charts. A/C# simply means to play an A chord with C# on the bottom. Traditionally, the bass player in the band will play C# here. This results in an A chord with C# on the bottom, which you know from this lesson is a first inversion triad (i.e. it has the third on the bottom). D/A is a second inversion D triad (i.e. it has the fifth on the bottom).

### 2. I've also seen chords with a bottom note that isn't even in the chord. For instance I've seen the chord "D/C". What does this mean?

This means to play a D chord with C on bottom. We know that there is no C note in a D major triad. But in fact, it is likely that this chord is technically a D7 chord (D, F#, A, C), and the composer is using the seventh on the bottom! So this, too, is a chord inversion. Needless to say, it is beyond the scope of this lesson (but somewhat common all the same).

### 3. When exactly are inversions used? Aren't root position triads fine?

Sure they are. But inversions give variety to your music. Here are two bars of music. The second bar uses an inversion on the second triad. Hear the variety?



Inversions are also used in a style of writing called **part-writing**, in the style of the composer J.S. Bach, to solve certain voice-leading problems.

# lesson 22

## music takes a rest

Often, we'll take a rest in the middle of the day. We may rest after we've finished a task. Or we'll rest in the middle of a job, just to break up the work into sections. Well, music has to rest, too. Music rests at the end of a piece--that's obvious. And music can rest in the middle of a piece, before moving on to the next section.

These rests in music are called **cadences**. When music comes to a stop or rest of some sort, it usually sounds like a musical "thought" has been completed. When you arrive at one of these resting spots, it is said that you have arrived at a cadence.

We're going to deal with three different types of cadences:

1. The authentic cadence;
2. The half cadence; and
3. The plagal cadence.

Take a look at this melody. Play it on a keyboard, guitar, recorder, or other instrument. (You can also hear it played in the video lesson.)



# cadences

---

Even without harmony, you can sense that the music comes to a rest at the end of the first line, and then of course comes to rest at the end of the second line. These resting points are marked by the arrows in the example. These resting points are the **cadences** in this piece. And if this piece were played with harmony accompaniment (check out the video lesson), you would sense these cadences even stronger.

Even though the first arrow marks a cadence, did you notice that it's not the kind of cadence you'd end the piece on? It feels like it wants to go on, doesn't it? The second arrow marks a cadence that feels more complete. You could definitely end the piece here if you wanted. You've just discovered that there really are different kinds of cadences in music!

Let's check out these different cadences.

---

## the authentic cadence

The **authentic** cadence sounds final. It's the cadence under the second arrow in the example above. When you hear an authentic cadence, the music feels like it could rest permanently.

The authentic cadence requires two things:

1. A chord progression of V to I; and
2. The musical phrase must actually **rest!**

**Note that although we use the term "rest" when speaking of cadences, we're speaking of a musical pause or repose, not a rest such as a quarter note rest.**

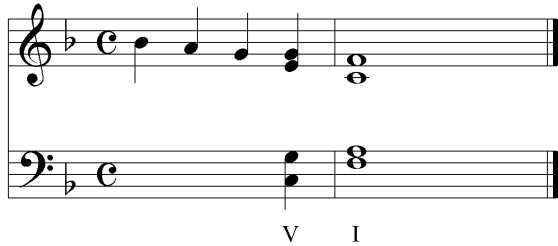
That's one of the more obvious features of a cadence--**the music must actually come to a rest!** A piece of music may have all kinds of V to I progressions. Only the ones that come to a rest, or complete a musical thought, are considered cadences.

If you've watched the video lesson, you may have notice that the first example played comes to a very final sounding stop. This is the authentic cadence. It's like a period at the end of a sentence. Just as a period ends a thought, so an authentic cadence ends a phrase, or musical "thought."

# cadences

---

Here are the final two bars of the example, with the V to I cadence shown.



Since the piece is in F-major, the V to I cadence is a C-major chord to a final F-major chord.

The melody in the example ends on F, and this helps give the authentic cadence its final feel. The movement of the bass (bottom) note from C to F helps give that final feel too. If the melody ended on a note other than F (A, for instance), it wouldn't feel quite as final. And if the bass note in the C chord was, say, an E instead of a C, it would sound fine, but the driving force to that final chord wouldn't feel quite as strong. You've just discovered that there are two types of **authentic** cadences: one gives a stronger resting feel than the other.



The strongest authentic cadence is called the **perfect authentic cadence**. All other authentic cadences are called **imperfect authentic cadences**.

---

## the perfect authentic cadence

To get that strong authentic cadence, the cadence must be a V to I progression that obeys these two rules:

1. The two chords in the cadence must be in root position; and
2. The top voice (the soprano voice) must end on the **tonic** note.

# cadences

Check out the last two bars of the example, and you'll see that this is a **perfect authentic cadence**. The V to I chords are in root position (The C chord has a C as the bottom note; the F chord has an F as the bottom note). And, the soprano (top) voice ends on the tonic note of F-major (F).

Here are some perfect authentic cadences. Notice in each pair of chords that they are in root position, and that the top *final* note is the tonic note of the key.

C-major                  G-minor                  D-major                  F-minor

V    I                  V    i                  V    I                  V    i

Notice that the V chords in minor keys have to be altered to be major chords. Also notice that the bass voice is always moving up a 4<sup>th</sup>, or down a 5<sup>th</sup>, because the chords are in root position. No inversions of the chords are allowed in the perfect authentic cadence!

In the example above, the C-major cadence shown is a perfect authentic cadence. Here is the same example, with the bottom note of the G chord changed from G to B.

C-major

This is no longer a perfect authentic cadence because *both* chords are not in root position. Here is the F-minor example from above, with the soprano note changed.

F-minor

# cadences

The soprano no longer ends on F. It now ends on A. This is no longer a perfect authentic cadence because the soprano voice does not end on the tonic note. In these two cases, we've changed the cadences from perfect to imperfect.

## the imperfect authentic cadence

The **imperfect authentic cadence** is also a V to I chord progression, but allows the chord progression to use inversions, and allows the soprano voice to end on a note other than the tonic.

As implied by the name itself, the imperfect authentic cadence simply breaks one or both of the perfect authentic rules!

Simple enough, isn't it? Look at these examples. They are imperfect authentic cadences. Try to figure out what makes them imperfect.

The image shows four examples of imperfect authentic cadences in C major, each consisting of a V chord followed by an I chord. The examples are: 1. F-major: V<sup>6</sup> (F<sup>6</sup>) to I (F). 2. A-major: V (A) to I (A). 3. Bb-major: V<sub>4</sub><sup>6</sup> (Bb<sub>4</sub><sup>6</sup>) to I (Bb). 4. E-major: V (E) to I (E). Each example is written on a grand staff with treble and bass clefs, and the chord progressions are labeled below the staff.

### Here's why they're imperfect authentic cadences:

- In the F-major example, the V-chord is not in root position—it's in first inversion;
- In the A-major example, the soprano does not end on the tonic—it ends on the 3<sup>rd</sup>, or mediant;
- In the Bb-major example, the V-chord is not in root position—it's in second inversion;
- In the E-major example, the soprano does not end on the tonic—it ends on the 5<sup>th</sup>, or dominant.

Look at the F-major example above. Here is the same example, changed to a perfect authentic cadence.

The image shows a perfect authentic cadence in F-major, consisting of a V chord (F<sup>6</sup>) followed by an I chord (F). The notation is on a grand staff with treble and bass clefs.

# cadences

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The  $V^6$  chord has been changed to a root position (V) chord. Since the example already ends with the soprano voice on the tonic, it's now a perfect authentic cadence.

## the half cadence

Take a look again at the first example in this lesson. The arrow over the first cadence, in bar 4, rests as the final cadence does. But this rest does not sound as final. It feels as though it must go on. If you listen to this example in the video lesson, you'll hear that there is a pause at this cadence, but the piece cannot really *end* here.

The cadence here ends on a dominant chord instead of a tonic. That's why it sounds like we need another phrase to finish it.

When music comes to a rest on the dominant chord, we call this a **half cadence**.

Play the first example in this lesson again. When you get to bar 4, notice that although it rests, it feels as though it needs to go on; it needs something more.

Here's a little ditty that features a half cadence in the middle, and a perfect authentic cadence at the end.



The half cadence progression rests on a dominant chord that is usually preceded by a I-chord. But in fact, the progression in a half cadence can be *any* chord to a V chord. Take a look at these half cadences.

Four examples of half cadence progressions are shown on a grand staff. Each example consists of two staves (treble and bass clef) and is separated by a double bar line. Roman numerals are written below each pair of staves.

- Example 1: A-minor (i) and Eb major (V)
- Example 2: Eb major (I) and F-major (V)
- Example 3: F-major (IV) and F#-minor (V)
- Example 4: F#-minor (i) and F#-minor (V)

# cadences

Notice that all of these imperfect cadences rest on the dominant, but can be preceded by any chord.

## the plagal cadence

A **plagal cadence** is a chord progression that moves from IV to I and comes to a rest. It is often referred to as the **amen cadence** because it sounds like the *amen* that is sung at the end of many hymns. Here is a progression that features a plagal cadence.

The image shows a musical score for a plagal cadence. The top staff is in treble clef with a common time signature (C). The bottom staff is in bass clef. The melody consists of quarter notes: C4, D4, E4, F4, G4, A4, B4, C5. The lyrics are: "Ea - sy Mu - sic The - ory is fun! A ——— men!" The chord progression is: I (C major), ii<sup>6</sup> (D minor), I<sup>6</sup> (C major), V (G major), I (C major), IV (F major), I (C major). A bracket labeled "Plagal Cadence" spans the IV and I chords. The bass line consists of whole notes: C3, F2, C3, G2, C3, F2, C3.

Check out these plagal cadences.

The image shows four examples of plagal cadences (IV to I) in different keys. Each example is shown in two staves (treble and bass clef). The keys are: Ab major, B-minor, E-minor, and A-major. The chord progressions are: IV I, iv i, iv i, IV I.

Remember, just because a progression moves from IV to I does not necessarily mean that you have a plagal cadence. There must be a *resting* on the I-chord. The main ingredient in a cadence is *rest*. So, just because music moves from IV to I, or V to I does not necessarily mean that you have a plagal or authentic cadence. To be a cadence, the music must rest.

# glossary

**Cadence:** A chord progression that signifies the end of a section.

**Religioso:** With reverence; religiously.

**Langsam:** Slowly.

**Brillante:** Bright, brilliant.

# summary

In this lesson, we learned about three types of cadences: the authentic cadence, the half cadence, and the plagal cadence. And we learned that the authentic cadence had two types: the perfect authentic and the imperfect authentic.

We also learned that one of the main features of a cadence is the **resting**. And we're not talking here about rests such as quarter note or half rests. We are talking about the music *sounding* like it has reached a resting point.

Here are examples of the cadences covered in this lesson.

The image shows four musical examples of cadences, each with a treble and bass clef staff. Above each staff is the key signature and the cadence type. Below each staff are Roman numerals indicating the chord progression.

- C-major Perfect Authentic:** Treble clef, C major key. Chords: C5 (V) and C1 (I).
- F-major Imperfect Authentic:** Treble clef, F major key. Chords: F5 (V) and F1 (I).
- A-minor Half:** Treble clef, A minor key. Chords: A1 (I) and F5 (V).
- Ab major Plagal:** Treble clef, Ab major key. Chords: Ab4 (IV) and Ab1 (I).

Here is a table of cadence types.

TYPE OF CADENCE	CHORD PROGRESSION
<b>Perfect authentic</b>	V to I, both chords in root position, soprano ends on the tonic
<b>Imperfect authentic</b>	V to I, where one of the chords is in inversion, and/or the soprano does not end on the tonic
<b>Half</b>	Any Chord to V (commonly I to V)
<b>Plagal</b>	IV to I



# F A Q

**1. I've heard a piece of music that ends on a IV chord. It sounds like it should go on, but that's the end of the piece. What's going on?**

This is not too common, and it is done for effect. Consider it a bit of poetic license in composing and arranging. The fact that you want it to go on *is* likely the reason they are arranging it that way.

**2. Can you use a perfect authentic cadence in the middle of a piece, even though it's not the end?**

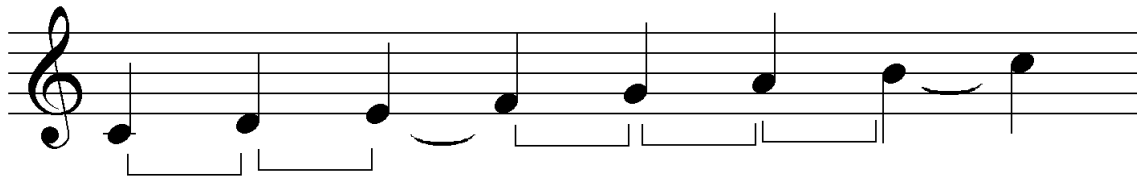
Certainly. Use your ears in composing and arranging. If that sound of finality is what you want, then that's what you should use. But you may also find that by substituting the perfect authentic cadence with an imperfect authentic cadence, you may get a desirable sense that the music must go on. Experiment!

# lesson 23

A **mode** is a type of scale. You've already learned to write major and minor scales in previous lessons. Music based on major and minor scales came into common usage in the early 1600s, and of course we have been using them ever since.

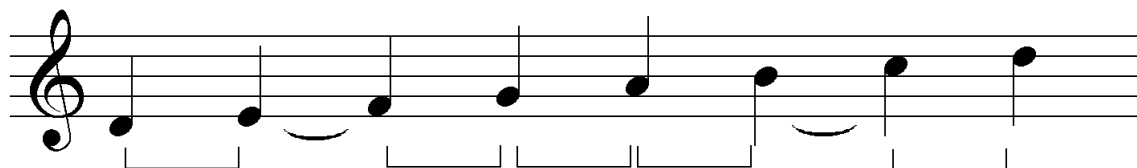
Before the 1600s, composers wrote in **modes**, instead of major and minor keys. There was a resurgence of interest in **modes** toward the end of the 19th century, with composers like Debussy.

So let's learn about modes. First, here is a C major scale.



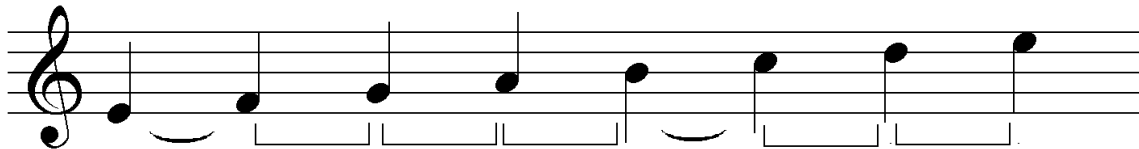
Notice that the tones and semitones are indicated. Tones are marked with brackets, and semitones are marked with slurs. When you play from C to C, using the major scale patterns of tones and semitones, you get a C major scale. Simple enough.

Now, what if you took this C major scale, and played it from D to D, instead of C to C, using the same C major key signature? You'd get this:



We've used the same notes, but *started* our scale on a different note. When we do this, we get a particular kind of scale called a **modal scale**, and music written using this scale is said to be in a particular **mode**. And the mode that goes from the supertonic to the supertonic an octave higher is called the **dorian mode**. In our example, we say that the note D is the key note, or **final**, of the mode.

We can start a scale on all the different notes of our C-major scale above. For example, if we write a scale from the mediant to the mediant, we get the **phrygian mode**:

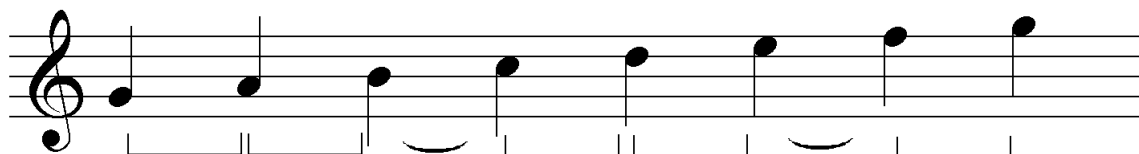


Notice that the tone and semitone pattern of C major is still used, except that the scale starts on the third degree, and goes to the third degree an octave higher.

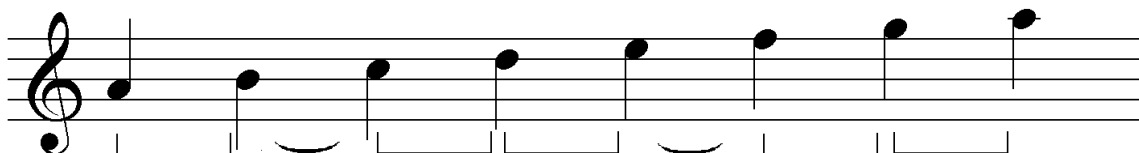
We can keep going, of course, starting and ending the scale on each note of the C major scale. So let's keep going, then. The modal scale based on the fourth degree is called **lydian**:



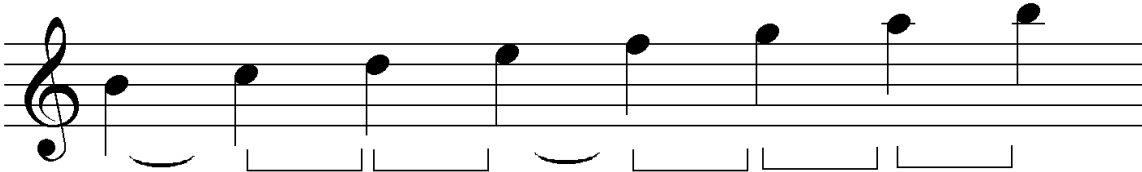
The fifth level is called **mixolydian**:



The sixth is **aeolian**:



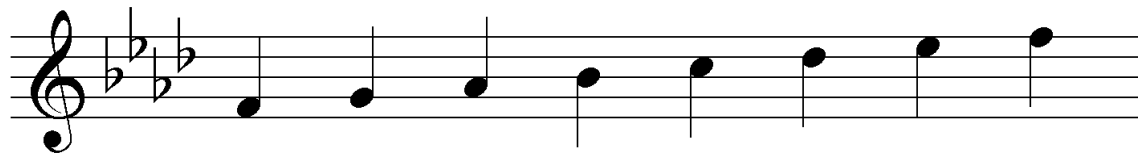
And the modal scale based on the seventh degree is called **locrian**:



We just built all of these modal scales based upon the C major scale. Can we build them based on any major scale? Certainly!

Let's take Ab major--that's four flats. Since the dorian mode is based upon the second degree of the scale, we would say that a scale going from Bb to Bb, using the key signature of four flats, is called the **Bb dorian** scale, because it's dorian, and it starts on Bb.

In four flats (the key signature of Ab major), here is a scale based upon the sixth degree of Ab major:



Since it's based on the sixth degree, it's an **aeolian** scale. And since it starts on F, we call it **F aeolian**.

Here is an interesting point about modes. A major scale is actually a mode in itself. It's called the Ionian mode, so if you are going to do a Bb major scale starting on Bb and ending on Bb, we call that Bb Ionian, even though we normally just call it the Bb major scale.

Here is a summary of scale degrees and their modes:

Scale Degree	Mode
1	Ionian
2	Dorian
3	Phrygian
4	Lydian
5	Mixolydian
6	Aeolian
7	Locrian



You remember in Lesson 16 that we determined keys by identifying the key signature. Now we need to expand that idea a little. Though key signature helps to determine key, we need to examine the melody closely and see its construction and direction. The following excerpt, on first glance, looks like it could be G-major, because there is a key signature of one sharp, and there are no leading tones (D#) to make E-minor (the relative minor) a possibility:



But, in fact, this is in the aeolian mode. Here is the procedure to arrive at that determination:

1. One sharp in the key signature indicates that it is either:
  - a. G-major,
  - b. E-minor, or
  - c. One of the seven modes
2. We determine that the key is not E-minor, because that would require the presence of D# to create the leading tone that's necessary to emphasize E as a tonic in E minor.
3. It could be G-major, but look at the melodic shape: there is much that points to E as a significant note, rather than G. The opening interval of E to B (a perfect 5th) establishes E as an important note. The first three notes of bar 3 are members of a triad built on E. And the shape of the melody at the end "pulls the ear" toward E. And indeed, E is the final note. So even though we know it cannot be E-minor, there is much evidence that E is some sort of **tonic**. It is in such cases that we need to examine the possibility of the use of a mode. E is the sixth note of the G-major scale, and the mode based on the sixth note is the aeolian mode. Therefore, this excerpt is in E-aeolian.

You can confirm this too, by simply playing the melody and listening carefully.

Take a look at this melody:



What makes it **Eb lydian**? Before, when we determined key, we would simply determine if the excerpt were major or minor, based upon the key signature, and the accidentals used, if any.

**DID YOU KNOW...** Our modern-day minor scales evolved out of the dorian and aeolian modes. What we often call natural minor is simply the aeolian mode. By raising the seventh note of that mode, we create harmonic minor. By raising the seventh note of the Dorian mode, we create the ascending melodic minor.



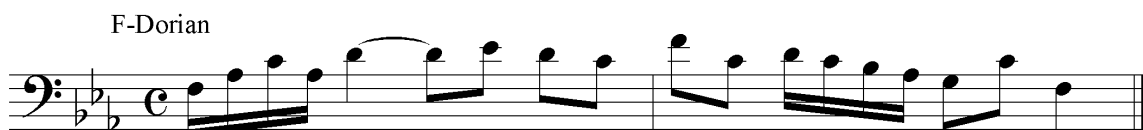
But now, we must also consider all of the modes, too. So let's check it out.

We've got a key signature of two flats, indicating either Bb major or G minor. We check for minor first, by looking for an F# leading tone to G minor. This excerpt uses F naturals throughout, so this piece is not G minor.

Previously, we would simply say that we must be looking at Bb major, but look again. Even though it's got a key signature of Bb major, the note Eb seems to have a special place of significance. The excerpt starts on Eb, and has scale-wise passage based on Eb. And it keeps coming back to Eb. The next phrase starts on Eb, and features another scale-wise passage starting on Eb. And it ends with another scale-wise passage leading down to Eb. Eb seems to take special significance over Bb. So, taking the key signature of Bb, but starting on Eb, which is the fourth note of a Bb scale, we conclude that this is the **lydian** mode. So this excerpt is in **Eb Lydian**.

## why use modes?

Modal melodies can be quite beautiful and are a very powerful tool for composers and arrangers. Here are three more modal melodies. Why not play them on your instrument before trying the quiz?



F#-Phrygian



Musical notation for the F#-Phrygian mode in treble clef, 2/4 time signature. The key signature has two sharps (F# and C#). The melody starts on F#4, moves to G4, then A4, and continues with a series of eighth and sixteenth notes, ending on F#4.

D-Mixolydian



Musical notation for the D-Mixolydian mode in bass clef, 3/4 time signature. The key signature has two sharps (F# and C#). The melody starts on D3, moves to E3, then F#3, and continues with a series of eighth and sixteenth notes, ending on D3.

# g l o s s a r y

**Quasi:** "In the style of" as in, "Quasi fantasia" (like a fantasia).

**Coda:** Literally, "a tail." The concluding section of a musical work.

**Tenuto:** To hold the notes for their full value.

**Divisi:** Divided. Two or more notes notated, where each note is played by a different performer.

# s u m m a r y

In this lesson, we learned about **modes** and **modal scales**. Modes use a major key signature, but are based upon a note other than the key note of the major scale.

A mode can be based upon any note of the major scale. For instance, if we write a scale from the mediant to the mediant degree of a major scale, we get the **phrygian** mode.

In determining what scale or mode a piece is in, we first look for a leading tone to the minor. If it is absent, we then look to see what note is the principle note in the melody. We do this by looking at the melodic shape of the melody. If the melody includes obvious phrase starts and ends on a note other than the tonic, it may be indicating a modal melody. We can confirm this by listening to the melody.



# F A Q

## 1. What are modes used for?

To most ears, modal melodies can add a sense of mystery, or “otherworldliness.” Modal melodies are one more tool the composer or arranger can use to add variety to music.

## 2. Can I take a major melody and make it a modal melody?

Yes. One way to do it is to simply take a major melody, and change the key signature (without changing the notes) to the major key one whole step down. That immediately gives you the same melody in the dorian mode. Give it a try! Play a C major melody using two flats (Bb major) in the key signature. In terms of whether it makes a “good” melody, sometimes this approach works, sometimes it’s not so great.

## 3. The aeolian mode seems to be the natural minor scale. Is it?

Yes it is, except that for a piece to be considered minor we must by definition see the leading tone to the minor tonic. If the leading tone is missing, it’s really the aeolian modal scale.



# lesson 24

You know all about the treble clef and the bass clef. We've been using these clefs in nearly every lesson in this music theory course. But did you know that there are *many* different clefs? We're going to explore some of these other clefs in this lesson.

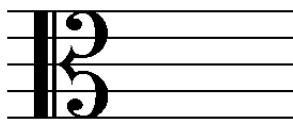
First, a quick note about the treble and bass clef. The treble clef is also known as the G clef, because it originated hundreds of years ago as a stylized letter G. The letter G evolved into the scroll-like sign that we know as the treble clef. The bass clef's other name is the F clef, because it started out as a letter F on the staff, eventually evolving into the bass clef we see today.

## the alto clef

There is another clef in use today, called the **C clef**. It looks like this:



The C clef is positioned so that it is centered on one of the lines of the musical staff. The line on which it is centered is considered to be Middle C. This clef gets a different name, depending on the line upon which it is placed. When the clef is centered on the middle line, it is called the **alto clef**:



The clef is centered on the middle line, indicating Middle C. Here is Middle C:

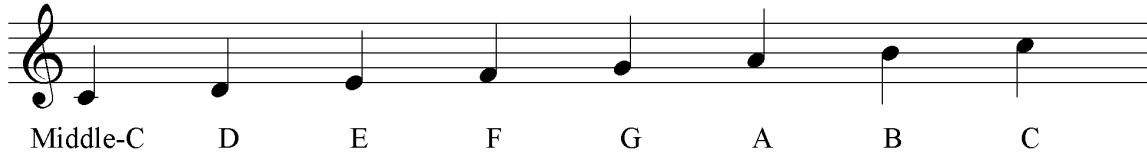


Some instruments use the **alto clef**. The viola is one such instrument.

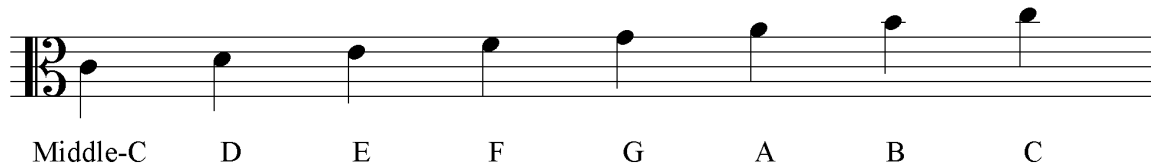
# other clefs

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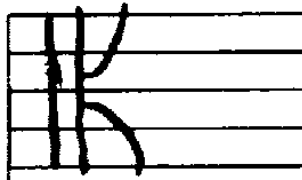
Here is a quick comparison between the treble clef and the alto clef. First, the C major scale in the treble clef:



Now, the same scale, written in the alto clef:



The C clef can be a fairly complicated clef to draw by hand. When hand writing the C clef, it is fine to draw it like this:



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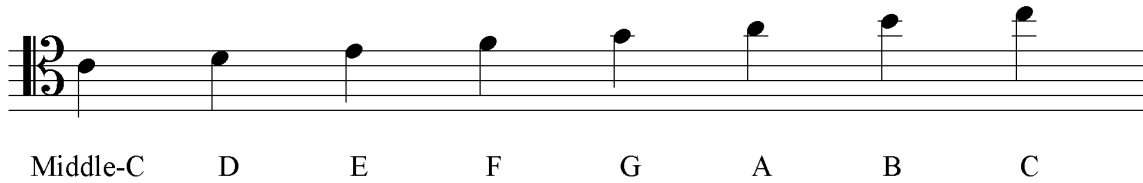
## the tenor clef

We can take the C clef and centre it on a different line. Instead of centering it on the middle line, we can centre it on the 4th line, like this:



# other clefs

When a C clef is centered on the 4th line, it's called the **tenor clef**. Here is a C major scale, starting on Middle C, in the tenor clef:



Compare it to the scales in the treble clef and the alto clef.

Who uses the tenor clef? Several instruments do, including the tenor trombone. This instrument often plays in the bass clef, and switches to the tenor clef for higher passages.

## Did you know...

The C clef, as we know, is called the alto clef when it is centered on the middle line, and the tenor clef when it is centred on the 4<sup>th</sup> line. You can place it on any line, but using it that way has become outdated. When the C clef was placed on the bottom line, it was called the **Soprano clef**. On the 2<sup>nd</sup> line, it was called the **Mezzo-soprano clef**. And on the top line, it was called the **Baritone clef**.

## why different clefs?

The reason we use different clefs is so that the majority of notes fall within the staff. The use of leger lines is then kept to a minimum. A part like this one in the bass clef...



...can be made much easier to read by writing it in the tenor clef instead:

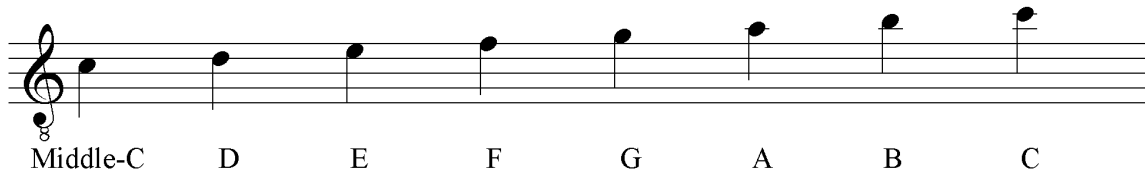


## the vocal tenor clef

There is another form of tenor clef, called the **vocal tenor clef**. It is formed simply by placing the digit 8 at the bottom of a standard treble clef, like this:



The vocal tenor clef is used almost exclusively by the tenor voice in a choir. The 8 under the clef means that every note is to be sung one octave lower than the same note in the standard treble clef. Here is a C scale, starting on Middle C, in the vocal tenor clef:



## the neutral clef

The final clef we'll look at in this lesson is the **neutral clef**. It is used for unpitched instruments such as many percussion instruments like snare drum, tambourine, tom-toms, and so on. In conventional music notation, all instruments need a staff of some sort to write notes on. When pitch is not relevant, the neutral clef is used. A neutral clef on a staff of two lines looks like this:



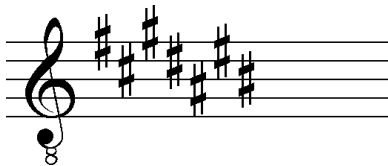
We use the neutral clef to indicate rhythm only, not pitch. We could use the two-line staff shown above when writing for high and low tom-toms, for example. Or we could use the top line for snare drum and the bottom line for bass drum. We could add a third line to indicate cymbals.

We can also use the neutral clef on the standard set of five lines. This would be ideal for writing for a complete drum set. In this case, we could write a small table or legend at the top of the piece to indicate what instruments are played on the various lines and spaces. Or we could write abbreviations such as "b.d." for bass drum and "s.d." for snare drum under the notes of the first couple of bars to let the reader know what each line and space means.

## placement of key signatures

Key signatures will be placed differently on each of these clefs. Here is each clef with a key signature of seven sharps and seven flats correctly placed.

All seven sharps:



All seven flats:



**DON'T FORGET:** The placement of sharps follows the pattern, "Father Charles Goes Down And Ends Battle," and the placement of flats follows the pattern, "Battle Ends And Down Goes Charles' Father."

# glossary

**Clef:** A symbol placed on a staff to indicate the pitches of each line and space.

**Con moto:** With motion.

**Tempo di Valse:** In a waltz tempo.

**Tonality:** Key.

# s u m m a r y

In this lesson, we learned about other clefs. The C clef centres on the Middle C line, and takes two common forms: a) the **alto clef**, which centres on the middle line of the staff, making the middle line Middle C, and b) the **tenor clef**, which centres on the 4th line, making the 4th line Middle C.

We also learned about the **vocal tenor clef**, which is used by choir tenors. This clef is simply a treble clef with an 8 written underneath, indicating that each note is to be sung one octave lower than the same note written on the standard treble clef.

And finally, we learned about the **neutral clef**, which is used when writing music for unpitched instruments, such as many percussion instruments.

The reason we use other clefs is so that the instrumentalist can see most of their notes placed right on the staff.



# F A Q

### 1. Can I use a vocal tenor clef where I'd use a tenor C clef?

There is no specific rule against it other than tradition itself. A trombone player will be confused to find a vocal tenor clef in music, even though it would work. You should stick with the clefs as they are traditionally used.

### 2. How do I know which clef to use for a particular instrument?

Every instrument has a particular clef that is the normal clef of choice. Some instruments will allow two different clefs, depending on the range of the music. It is best to use only the clefs normally associated with that instrument. In orchestras, all instruments use the treble clef except bassoon, trombone, cello, and double bass which use the bass clef, and viola which uses the alto clef.

### 3. If I am writing music for piano, and the left hand of music goes too high, can I switch to treble clef?

Yes, it is possible to have both the left-hand and right-hand parts in treble clef.

# lesson 25

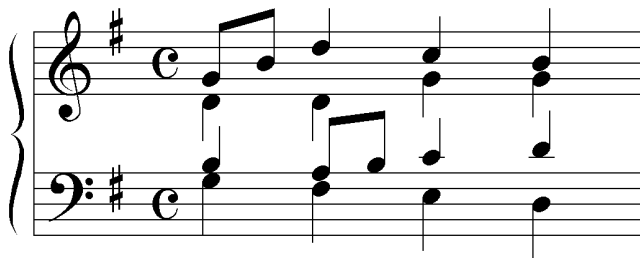
A musical score is a copy of a piece of music that shows all the instrumental parts together, giving a view of the entire piece. Conductors often work from scores, because they are able to see everyone's part at the same time.

A score represents the culmination of everything you've been doing in all of these lessons. Everything you've been learning in Easy Music Theory can be found in a score: time signatures, clef, keys, scales, modes, tuplets, and so on.

There are two common types of score: **the short score**, and **the full score**.

## the short score

The **short** score is also called the **condensed** score, or the **close** score. The short score uses just two or three staves, with the two-stave format being the more common. Here is an example of short score:



Condensed score, or short score

Notice that each staff of the short score has notes that have their stems pointing upward, and notes with stems pointing downward. The stem direction seems to break the rule that notes above the middle line must point their stem downward, and notes below the middle line must point their stem upward.

In two-stave short score, the understanding is that in the top staff, notes with stems upward are to be sung or played by the soprano voice (or instruments) and notes with the stems downward are to be sung or played by the alto voice (or instruments). In the bottom staff, notes with the stems pointing upward are to be sung or played by the tenor voice(s) (or instruments) and notes with the stems downward are to be sung or played by the bass voice(s) (or instruments).

It is much more common for voices to perform from a score like this rather than instruments. Instrumentalists prefer to see simply their own part on the page. Vocalists rely more on seeing their notes in relation to the other existing parts; it makes it a little easier to sing in tune.



**DID YOU KNOW...** Prior to 1600, the use of scores to show every performer's part was relatively rare. It was far more common for each performer to have their own part in what was called a **part-book**.

---

## short score with more than two staves

It is possible to have more than two staves in a short or close score. For example, if you are writing for full orchestra, but wish to conserve space, you may choose to use a short score format of, let's say, four staves: first staff for woodwinds, second staff for brass, third staff for strings, and the fourth staff for percussion.

Sometimes composers will use multiple staves in this fashion, but will use the upper staves for the high notes and the lower staves for the low notes, then indicate with small lettering which instruments play which notes.

Here is an example of such a score:

The image shows a condensed musical score for a medium orchestra. It consists of four staves. The first staff is labeled 'Vln1, Fl1:' and contains four chords. The second staff is labeled 'Vln2, Cl1/2, Tpt1/2:' and contains a sequence of notes and chords. The third staff is labeled 'Vla, Bsn:' and contains a sequence of notes and chords. The fourth staff is labeled 'Vc, Cb:' and contains a sequence of notes. The music is in common time (C) and uses a treble clef for the first three staves and a bass clef for the fourth.

## Condensed score for medium orchestra

There are good points and bad points to this type of score. The good point: you can see all the music for a medium-sized orchestra at a glance. The bad point: the clutter. It's difficult to narrow down which instrument is playing which notes. Notice that there are written indications in the appropriate areas about which instrument is playing. This helps, but can also add to the clutter, too.

Another good point to the short score is that as you become more adept at recognizing chords, you can perceive the general tonality of the piece quickly using this type of score.

The clutter of the short score can make things difficult in rehearsal situations. Even though you have the score, it can be difficult to determine which instrument is at fault as problems arise.

Often, publishers will choose to provide both a full score (see below) and a short score with each orchestral or concert band publication. This is very useful, because it allows the conductor to work from a full score in rehearsals, then provide the option of switching to a short score for performance. The short score usually will require less frequent page turns, because more music can be fit onto one page. As you can see, you also have to be a bit "creative" with your use of stem directions if you have three or more parts on a staff! And because several instruments are on one staff, it is not possible to show the proper transposition of a transposing instrument such as clarinet or Bb-trumpet.

---

## full score or open score

For fairly straightforward music, a short score is ideal--it shows everyone's part in a concise format. But it is sometimes desirable to show each part on its own staff.

Let's go back to the excerpt at the beginning of this lesson. Since it was intended for four players, a score showing each part on its own staff would require four staves. A score that shows each part on its own staff is called **open score** or **full score**. (The two terms open and full are synonymous, and can be used interchangeably.)

There are many different types of open score, depending on the number and type of instruments for which you are writing. For example, here is the condensed score excerpt given above, rewritten in open score for string quartet:

The image shows a musical score for a string quartet in full score format. It consists of four staves, each labeled on the left: Violin 1, Violin 2, Viola, and 'Cello. The key signature is one sharp (F#) and the time signature is common time (C). The Violin 1 staff has a treble clef and contains notes with stems pointing up. The Violin 2 staff has a treble clef and contains notes with stems pointing down. The Viola staff has an alto clef (C-clef on the third line) and contains notes with stems pointing up. The 'Cello staff has a bass clef and contains notes with stems pointing down. All notes are quarter notes.

### String quartet in full score

You can see that all of the notes of the short score excerpt have been given their own staff, according to stem direction. In the top staff of the short score, stems up have been given to violin I, and stems down to violin II. The viola (an instrument shaped like a violin, but slightly bigger and tuned a perfect 5th lower) gets the notes that were the stems up notes of the bass staff of the short score. The cello is given the stems down notes. With the open score format, the conductor can see each player's part clearly, because each part is on its own staff.

If the excerpt was intended for voices, a modern vocal score--also called modern choral score--is frequently used. Here it is:

Soprano

Alto

Tenor

Bass

## Modern vocal score

It looks like the string quartet score, except that the tenor line has been given a **vocal tenor clef**, a clef that looks like a treble clef with an 8 beneath it. You will have seen this before, in Lesson 24, and it means to sing the notes an octave lower than treble clef.

There are many, many types of both close and open scores, and so it is not feasible to list them all. This lesson is simply intended to give you an idea of how the various score formats work. The quiz for this lesson will require you to transcribe music from one score format to another. Here are the formats you will be required to know:

## Condensed score, or short score

A musical score for a string quartet in full score format. It consists of four staves: Violin 1, Violin 2, Viola, and 'Cello. The key signature is one sharp (F#) and the time signature is common time (C). The Violin 1 and Viola parts have a melodic line starting with a quarter note, followed by an eighth note, and then a quarter note. The Violin 2 and 'Cello parts have a simpler line of quarter notes.

String quartet in full score

A musical score for a modern vocal score. It consists of four staves: Soprano, Alto, Tenor, and Bass. The key signature is one sharp (F#) and the time signature is common time (C). The Soprano and Tenor parts have a melodic line starting with a quarter note, followed by an eighth note, and then a quarter note. The Alto and Bass parts have a simpler line of quarter notes.

Modern vocal score

# glossary

**Score:** A piece of music that shows all instrumental parts.

**Satz:** Movement, as in “erste satz” (first movement).

# summary

In this lesson, we learned about two basic types of score formats:

- a. The **short score**, also called the **condensed** score, or **close** score; and
- b. The **open score**, also called the **full** score.

The short score is usually two or three staves, and can display several parts on a single staff. When two parts are displayed on a staff, the upper part notes are displayed with stems up, and the lower part notes are displayed with stems down.

The full score uses a separate staff for each instrument or voice. When the parts are intended for voices, the **modern vocal score** is used, which shows each voice on its own line.



# FAQ

**1. Which score format should I use when arranging a piece for a small ensemble of players?**

It depends upon a few factors, two of which are the size of the group, and how you prefer to write. Dealing with writing preference, you may want to write a two-stave score that resembles a piano part, and then assign the various musical lines to different instruments. For an example, look at the condensed score example in this lesson. You can do this with a three-stave score as well. Once your score is written, you can then separate them out into the different instrumental parts, and create a full score as well.

**2. How do I write a short score when I'm writing for C instruments such as flutes, and Bb instruments such as Bb trumpets?**

You'll have to transpose your Bb parts into C so that all parts on the same staff are written using the same transposition. Change a Bb trumpet part to C by transposing downward a whole step.



# **worksheets**

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# w o r k s h e e t

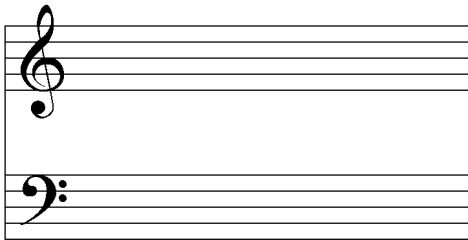
## lesson 1: the grand staff



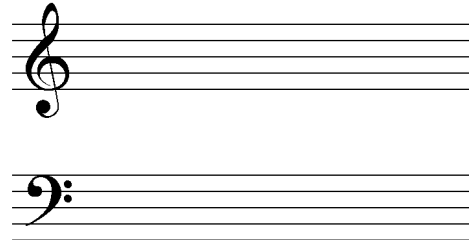
**REMEMBER:**

Always use a sharp pencil when doing music theory. You'll need to make lots of corrections as you learn, and a pencil is much easier to erase than a pen!

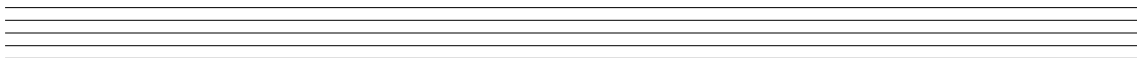
1. Here is a grand staff:



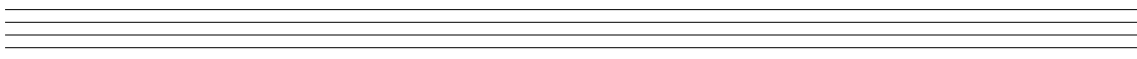
Using a ruler, join these two staves together with a line down the left-hand side, forming a grand staff.



2. a. Draw 8 treble clefs on the following staff:



b. Draw 8 bass clefs on the following staff:

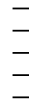
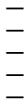
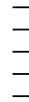
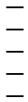


# worksheet

3. Draw a grand staff in the space below. Follow these steps:
- Draw two staves, using the dashed lines below as guides;
  - Draw a treble clef on the upper staff;
  - Draw a bass clef on the lower staff;
  - Join the two staves with a vertical line on the left.



Better use a ruler for this one.



4. Fill in the blanks.

A musical staff consists of \_\_\_\_\_ lines and \_\_\_\_\_ spaces.

We number lines and spaces starting at the \_\_\_\_\_ (top/bottom?).

A treble staff and a bass staff, joined on the left side by a line, is called a

\_\_\_\_\_.

## DID YOU KNOW...



The first staff appeared around the year 1000. Before that, writers of music would show, in a rather approximate way, the shape of a melodic line with characters called “neumes.” Lines were created, one by one, over the following centuries, to allow for a more exact way of specifying pitches.

# worksheet

## lesson 2: notes

1. You know that notes are named by using the first seven letters of the alphabet, and that once you reach the note G, the next note is named A. With that in mind, fill in the blanks:

A B C D

E D C

F A

B D

F G A

G F  D

A B

F E

Careful! Some of these go backwards, and some skip by 2's!



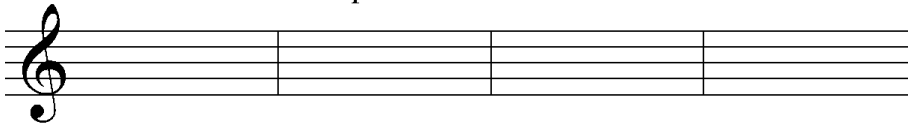
2. Draw a note as requested:

On the  
1st line

In the 3rd  
space

On the 4th  
line

On the  
2nd line

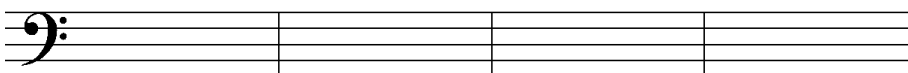


In the 2nd  
space

On the  
5th line

In the 1st  
space

On the 3rd  
line



3. Write the letter name underneath the second note of each pair.



Always check  
the clef!

Three musical staves in treble clef. Each staff contains two pairs of notes. The letter name of the first note in each pair is written below it, followed by a blank line for the second note.

Staff 1: D — G — A — B — E —

Staff 2: G — E — C — A — E —

Staff 3: A — B — E — A — D —

4. Write the letter name underneath the first note of each pair.

Three musical staves in bass clef. Each staff contains two pairs of notes. The letter name of the second note in each pair is written below it, followed by a blank line for the first note.

Staff 1: — C — G — G — A — C

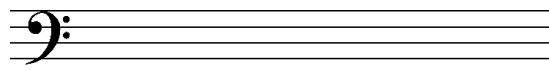
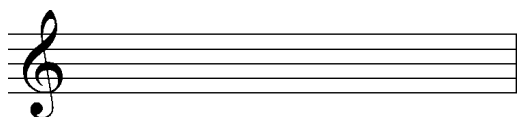
Staff 2: — E — B — F — F — F

Staff 3: — D — F — A — F — A

5. Using the words below, write a note that represents each letter.

**F A C E**

**B D G C A F E**



# worksheet

6. Draw two notes, a high one and a low one, for each letter name. The first one has been done for you. (There are more than two possible notes for each letter name, but just show two in your answer.)

Bass clef staff with notes: E (on the first ledger line), G (on the second line), F (on the first space), C (on the second space), D (on the third line), A (on the second space), B (on the third line).

Treble clef staff with notes: F (on the first space), B (on the second line), A (on the first space), E (on the second line), G (on the first space), D (on the second space), C (on the first space).

7. Write the correct letter name under each note. Then draw a line from the Middle C example in the *treble* clef to the Middle C example in the bass clef.

Three pairs of staves. Each pair consists of a treble clef staff and a bass clef staff. The first pair shows a note on the first ledger line of the treble clef and a note on the first ledger line of the bass clef. The second pair shows a note on the first space of the treble clef and a note on the first space of the bass clef. The third pair shows a note on the second line of the treble clef and a note on the second line of the bass clef.

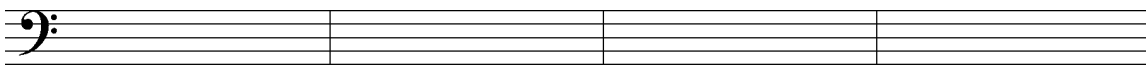


This one deals with leger lines.

8. Write the correct letter name under each note. **Watch the clef!**

Four musical staves with notes. The first staff is in treble clef, the second is in treble clef, the third is in bass clef, and the fourth is in bass clef. Each staff contains a sequence of notes across four measures.

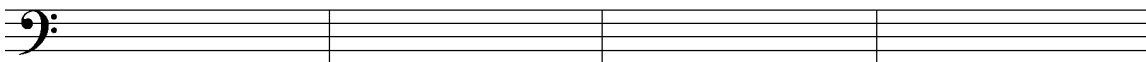
9. For each letter name, write one possible note. **Watch the clef!**



F D E G C F G A B E D F C G D B



E G A B C D A G F G A C B E G F

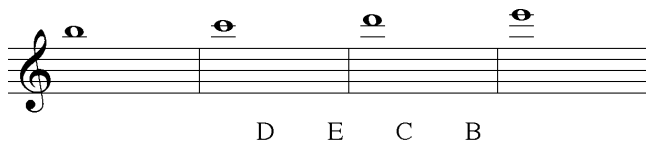


A C E D G F B A F G A D E C F B

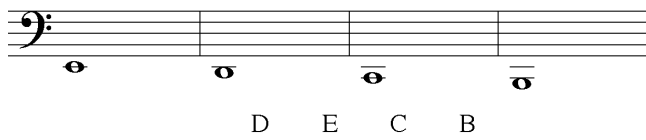


D C E B G E B F A C D G E A F C

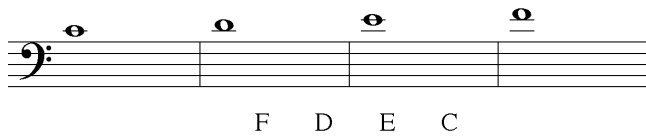
10. Circle each letter and draw a line to the correct note on the staff above the letters.



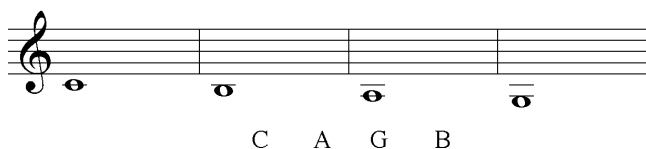
D E C B



D E C B



F D E C



C A G B

### HELPFUL SUGGESTION...

Hopefully, you are beginning to learn how to play written music on a musical instrument. Although we've written names under notes in this lesson, I recommend not writing the note names underneath the notes in music for your instrument, because this will slow down the learning process.

Try pointing to each note in the piece you are learning to play and say the note name out loud before playing.

11. Place a treble clef on the staff. Then write and name the indicated notes. The first one is done for you.

12. Place a bass clef on the staff. Then write and name the indicated notes.

13. On the staff, draw a treble clef. Then name the notes.

Name: \_\_\_\_\_

14. On the staff, draw a bass clef. Then name the notes.

Name: \_\_\_\_\_

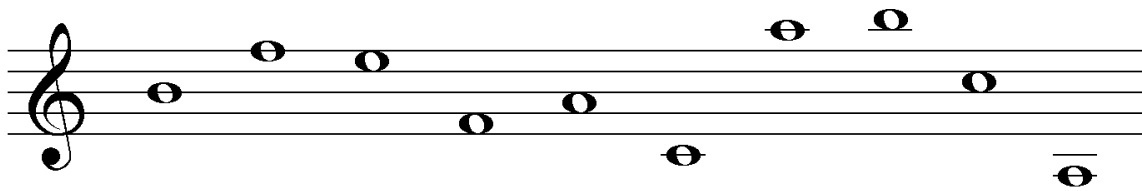
15. Fill in the missing note names. Check the order of the letters. Sometimes they go backward!

D	E	F	___	___	B	C
G	F	___	___	___	B	A
F	G	___	___	___	D	
A	B	___	___	___	___	___
___	___	___	___	B	C	
___	___	E	F	___	___	B

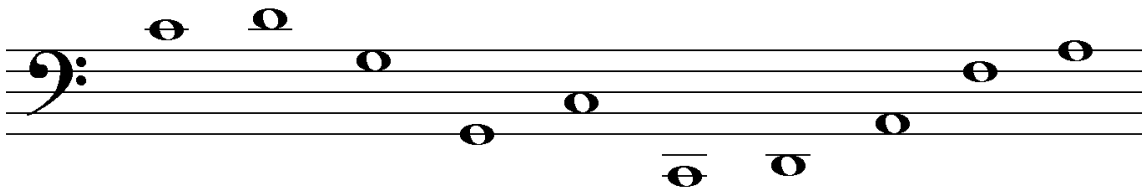
**Remember!** Note names follow the order of the alphabet, from A to G. Going past G means you have to go back to A again.



16. Name the notes.

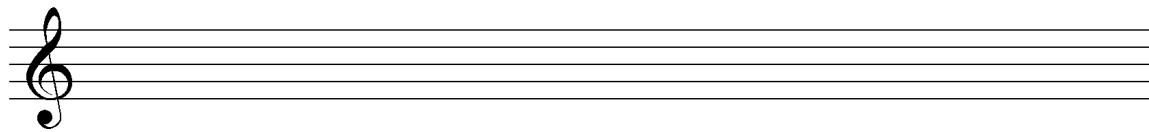


\_\_\_\_\_

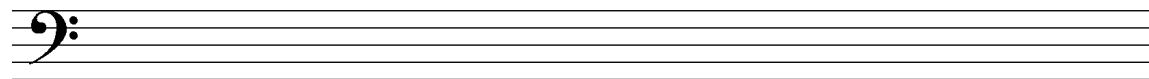


\_\_\_\_\_

17. Write the indicated notes without using leger lines. (Notice that you may have more than one choice—choose one.)



F      C      B      E      D      G      A



E      F      A      C      B      G      D

18. Draw two different notes for each letter name given. Make sure one of the notes uses leger lines. Two examples are given.

Remember! A leger line acts as a sort of staff extension.

A C B G D

E D C B F

You can combine leger lines to extend the staff even further.

19. Name the following notes. The first one is done for you.

E \_\_\_\_\_

20. Name the notes in the grand staff.

Names: \_\_\_\_\_

21. Write the note names under the staves.

A musical staff with a treble clef. The notes, from left to right, are: G4 (first space), A4 (second space), B4 (third space), C5 (fourth space), D5 (first line), E5 (first space), F5 (second space), G5 (third space), A5 (fourth space), B5 (first line), C6 (second space), D6 (third space), E6 (fourth space), F6 (first line), G6 (second space), A6 (third space), B6 (fourth space), C7 (first line). There are horizontal dashes below the staff for writing the note names.

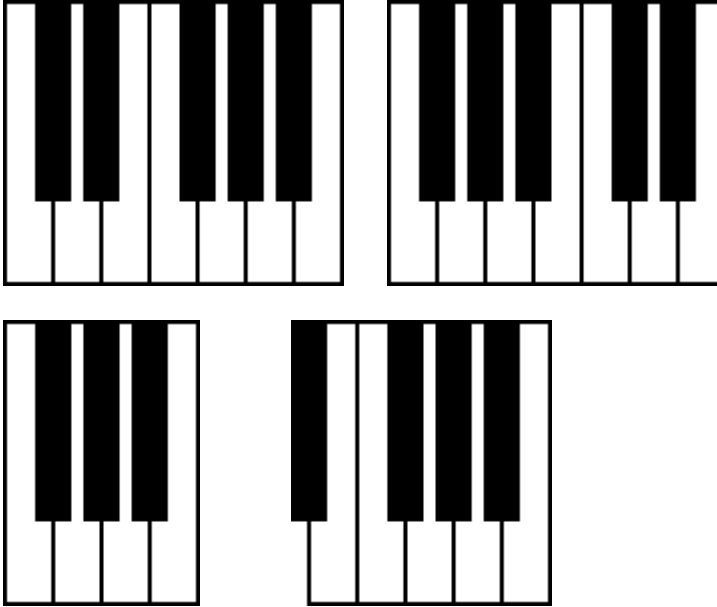
A musical staff with a bass clef. The notes, from left to right, are: C3 (first space), D3 (second space), E3 (third space), F3 (fourth space), G3 (first line), A3 (second space), B3 (third space), C4 (fourth space), D4 (first line), E4 (second space), F4 (third space), G4 (fourth space), A4 (first line), B4 (second space), C5 (third space), D5 (fourth space), E5 (first line), F5 (second space), G5 (third space), A5 (fourth space), B5 (first line), C6 (second space), D6 (third space), E6 (fourth space), F6 (first line), G6 (second space), A6 (third space), B6 (fourth space), C7 (first line). There are horizontal dashes below the staff for writing the note names.

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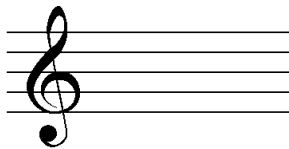
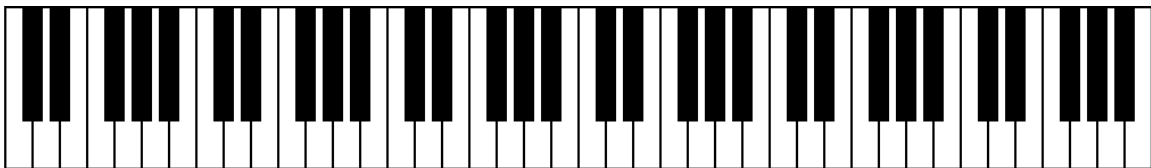
# w o r k s h e e t

## lesson 3: the keyboard

1. Label the white keys on the keyboard diagrams.



2. Draw Middle C on the treble staff. Then draw a line from the note, to Middle C on the keyboard.

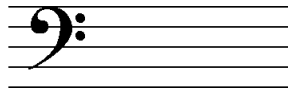
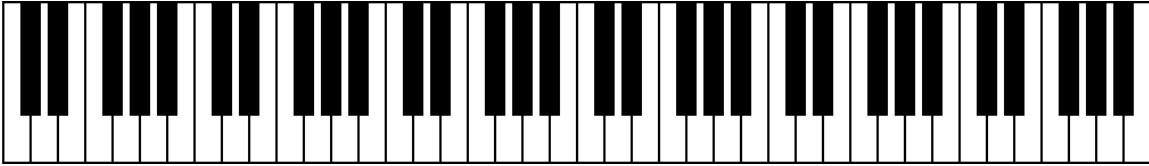


**Remember from the video lesson:**

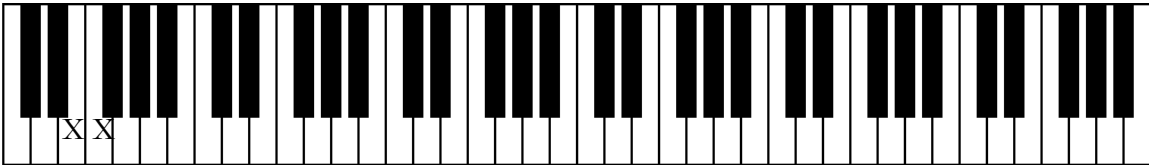
Middle C gets its name from where it's found - just find the C in the middle of the keyboard!



3. Draw Middle C on the bass staff. Then draw a line from the note, to Middle C on the keyboard.



4. On the keyboard below, draw an 'X' on each pair of white notes that are an interval of one semitone apart, in other words, with no black notes between them. Write the note names under each note of the pair. The first pair is done for you.



E F

---

# w o r k s h e e t

## lesson 4: note durations

1. Place notes in the brackets. The first one is done for you.


Four quarter notes: 


Eight eighth notes: 


One whole note: 


Two half notes: 

2. Take the graphics from Exercise 1 and put them in order, starting with the longest note. Darken in the vertical lines as necessary to make them match the graphics in Exercise 1. Fill in the number and name of the notes, too.

\_\_\_\_\_ 

\_\_\_\_\_ 

\_\_\_\_\_ 

\_\_\_\_\_ 

3. Complete the brackets with the specified notes as shown. Make sure you start your notes in the correct box! Darken in the vertical lines as necessary. The first one is done for you.

a. Complete it with eighth notes: 

b. Complete it with half notes: 

c. Complete it with half notes: 

d. Complete it with quarter notes: 

e. Complete it with eighth notes: 

f. Complete it with half notes: 

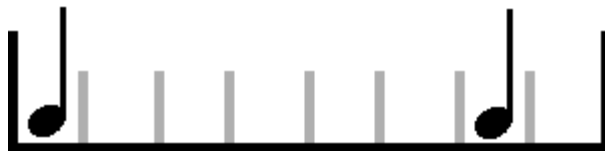
g. Complete it with half notes:



h. Complete it with whole notes:



i. Complete it with eighth notes:



j. Complete it with quarter notes:



4. Take a look at this chart:



a whole note = 4  
a half note = 2  
a quarter note = 1  
an eighth note =  $\frac{1}{2}$

Using the chart, write a single note that represents the given number: The first one is done for you:

a. 1 

b.  $\frac{1}{2}$  \_\_\_\_\_

c. 4 \_\_\_\_\_

d. 2 \_\_\_\_\_

5. Add the numbers as shown, and then write a single note that represents the number. The first one is done for you. This exercise uses dotted notes, so go back and review the lesson if you need to!

a.  $1 + 1 = \underline{2} = \text{♩}$

b.  $2 + 2 = \underline{\quad} = \underline{\quad}$

c.  $1 + 2 = \underline{\quad} = \underline{\quad}$  (*hint: Remember your dotted notes!*)

d.  $2 + 2 = \underline{\quad} = \underline{\quad}$

e.  $1 + \frac{1}{2} = \underline{\quad} = \underline{\quad}$

f.  $1 + 1 + 1 + 1 = \underline{\quad} = \underline{\quad}$

g.  $1 + 1 + 1 = \underline{\quad} = \underline{\quad}$

h.  $\frac{1}{2} + \frac{1}{2} = \underline{\quad} = \underline{\quad}$

i.  $\frac{1}{2} + \frac{1}{2} + 1 + 1 = \underline{\quad} = \underline{\quad}$

j.  $4 - 2 = \underline{\quad} = \underline{\quad}$

k.  $4 - \frac{1}{2} - \frac{1}{2} = \underline{\quad} = \underline{\quad}$

l.  $2 - \frac{1}{2} = \underline{\quad} = \underline{\quad}$

# worksheet

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6. A note is given. Draw the note that is half the value of the given note.

a.  \_\_\_\_\_

b.  \_\_\_\_\_

c.  \_\_\_\_\_



Now take the three sets of notes above, and turn them into equations as you did in Exercise 5. The first one is done for you.

d.  $4 + 2 = 6$

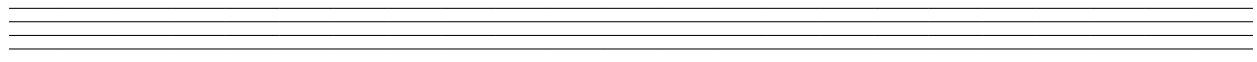
e. \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

f. \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

Recalling from the lesson that a dotted note adds half of a note's value to itself, complete the following:

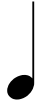

 +  can be reduced to \_\_\_\_\_

Draw 10 dotted half notes on the bottom line of this staff (note stems up):

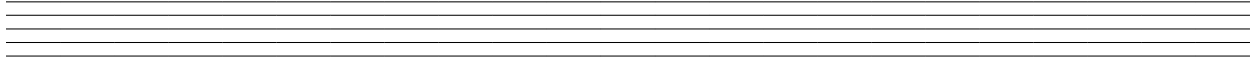


# worksheet

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 +  can be reduced to \_\_\_\_\_

Draw 10 dotted quarter notes on the top line of this staff (note stems down):



7. Change these math equations to musical equations, then complete the musical equation with a single note. The first one is done for you.

a.  $1 + 1 + 1 = 3$



b.  $1 + \frac{1}{2} = 1\frac{1}{2}$

\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

c.  $2 + 1 = 3$

\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

d.  $\frac{1}{2} + \frac{1}{2} + 2 = 3$

\_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

e.  $\frac{1}{2} + \frac{1}{2} + \frac{1}{2} = 1\frac{1}{2}$

\_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

f.  $1 + 1 + \frac{1}{2} + \frac{1}{2} = 3$

\_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

g.  $2 + 2 = 4$

\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

h.  $3 + 1 = 4$

\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

i.  $1 + 1 + 1 + 1 = 4$

\_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

j.  $\frac{1}{2} + 1 = 1\frac{1}{2}$

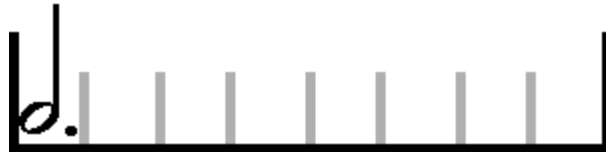
\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

8. The following brackets contain dotted notes. Complete the brackets with the notes, as requested. The first one is done for you. **Don't forget to darken in vertical lines as necessary!**

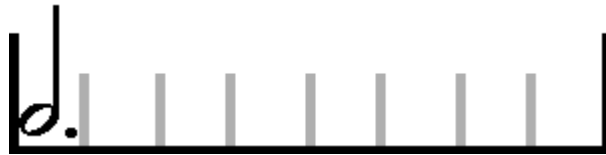
a. Complete with eighth note(s):



b. Complete with eighth note(s):



c. Complete with quarter note(s):



9. Complete the following:

a. \_\_\_\_\_ half note(s) equal one whole note.

b. \_\_\_\_\_ quarter note(s) equal one whole note.

c. \_\_\_\_\_ eighth note(s) equal one whole note.

d. There are \_\_\_\_\_ half notes in four quarter notes.

e. There are \_\_\_\_\_ eighth notes in two quarter notes.

f. One quarter note takes up the same space as \_\_\_\_\_ eighth note(s).

g. Three eighth notes take up the same space as \_\_\_\_\_ dotted quarter note(s).



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# worksheet

## lesson 5: durations, part 2

1. Combine the following notes to make one note. The first one has been done for you.

a)  = 

d)  = \_\_\_\_\_




b)  = \_\_\_\_\_

e)  = \_\_\_\_\_

c)  = \_\_\_\_\_


f)  = \_\_\_\_\_

2. Complete the following:



a)  =  + 

e)  =  + \_\_\_\_\_








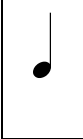
b)  =  + \_\_\_\_\_

f)  = \_\_\_\_\_


c)  =  +  + \_\_\_\_\_


g)  +  = \_\_\_\_\_

3. Draw a line from the note in the left column to the note in the right column that is half its value.


4. How many sixteenth notes must you combine to equal the following notes? (The first two have been done for you.)

a)  = 4


d)  = \_\_\_


g)  = \_\_\_


b)  = 6

e)  = \_\_\_

h)  = \_\_\_

c)  = \_\_\_

f)  = \_\_\_


i)  = \_\_\_

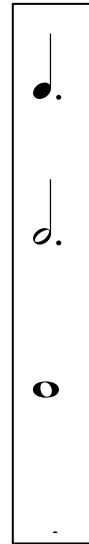
5. The following tied notes can also be represented by a dotted note. Find the correct answer in the answer list on the right and draw the dotted notes.

a)  = \_\_\_\_\_

b)  = \_\_\_\_\_

c)  = \_\_\_\_\_

d)  = \_\_\_\_\_



6. Draw a single note that represents the given notes.

a)  = \_\_\_\_\_

b)  = \_\_\_\_\_

c)  = \_\_\_\_\_

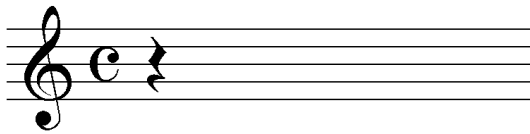
d)  = \_\_\_\_\_

e)  = \_\_\_\_\_

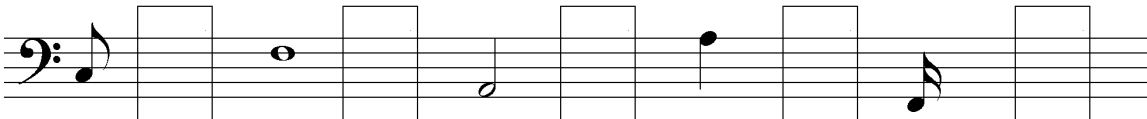
7. Fill in the chart with the correct note values.

○															




8. Draw four quarter note rests beside the one given.





9. Draw a rest of equal value beside the given note.





10. Study the notes in the following equations. Add one note that will make each equation true. (The first one is done for you.)

a)  +  = 



d)  +  = \_\_\_\_\_

g)  +  +  = \_\_\_\_\_

b)  +  +  = \_\_\_\_\_

e) \_\_\_\_\_ +  = 

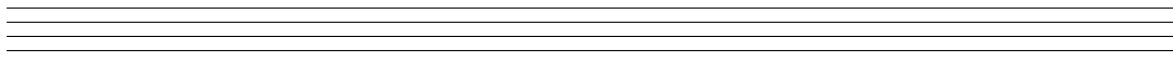
h)  + \_\_\_\_\_ +  = 

c)  =  \_\_\_\_\_

f)  =  +  + \_\_\_\_\_

i)  +  +  +  +  = \_\_\_\_\_

11. Some of the notes have stems pointing in the wrong direction. Rewrite the music, correcting the mistakes.



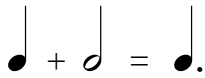
12. Fill in the blanks.

- If a quarter note is worth 1, a half note is worth \_\_\_\_\_.
- If a half note gets 1 beat, a whole note gets \_\_\_\_\_ beat(s).
- If an eighth note gets 1 beat, a whole note gets \_\_\_\_\_ beat(s).
- \_\_\_\_\_ half note(s) equal(s) 1 whole note.

- e. Four quarter notes equal \_\_\_\_\_ half note(s).
- f. If a whole note gets 4 beats, a quarter note gets \_\_\_\_\_ beat(s).
- g. Three quarter notes equal one \_\_\_\_\_ note.
- h. Two eighth rests can be replaced by one \_\_\_\_\_ rest.
- i. Four quarter rests can be replaced by one \_\_\_\_\_ rest.
- j. Four sixteenth notes equal two \_\_\_\_\_ notes.

13. Assume that a quarter note equals one beat. Convert the following equations to notes. The first is done for you.

a)  $1 + 2 = 3$



b)  $2 + 2 = 4$

\_\_\_\_ + \_\_\_\_ = \_\_\_\_

c)  $3 + 1 = 4$

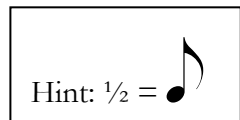
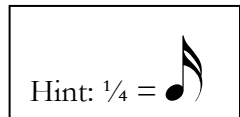
\_\_\_\_ + \_\_\_\_ = \_\_\_\_

d)  $\frac{1}{2} + \frac{1}{2} = 1$

\_\_\_\_ + \_\_\_\_ = \_\_\_\_

e)  $\frac{1}{4} + \frac{1}{4} + \frac{1}{2} + 1 = 2$

\_\_\_\_ + \_\_\_\_ + \_\_\_\_ + \_\_\_\_ = \_\_\_\_



f)  $1 + \frac{1}{4} + \frac{1}{4} = 1\frac{1}{2}$

\_\_\_\_ + \_\_\_\_ + \_\_\_\_ = \_\_\_\_

g)  $1 + \frac{1}{4} + \frac{1}{4} = 1\frac{1}{2}$

\_\_\_\_ + \_\_\_\_ + \_\_\_\_ = \_\_\_\_

h)  $2 + 1 + \frac{1}{2} + \frac{1}{2} = 4$

i)  $1 + 1 = 2$

\_\_\_\_ + \_\_\_\_ + \_\_\_\_ + \_\_\_\_ = \_\_\_\_

\_\_\_\_ + \_\_\_\_ = \_\_\_\_

j)  $2 + 1 + 1 + 2 = 6$

\_\_\_\_ + \_\_\_\_ + \_\_\_\_ + \_\_\_\_ = \_\_\_\_



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# worksheet

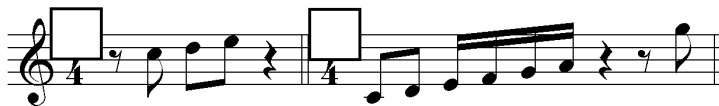
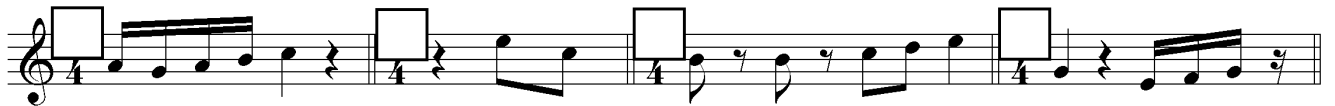
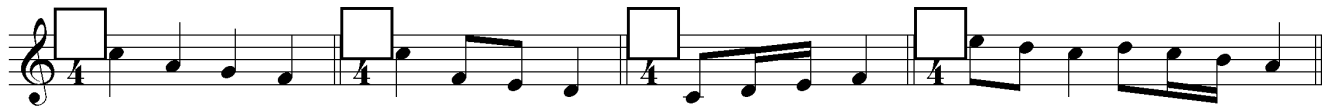
## lesson 6: measures

1. Fill in the blanks.

a. In simple time signatures, the top number tells us the number of \_\_\_\_\_ in a bar.

b. In  $\frac{3}{4}$  time, there are \_\_\_\_\_ beats in every measure, and the kind of note that gets the beat is the \_\_\_\_\_ note.

2. How many quarter note beats are in each of these bars of music? Write the answer in the square.



3. For each musical excerpt, draw bar lines according to the time signature. Write the counts underneath.

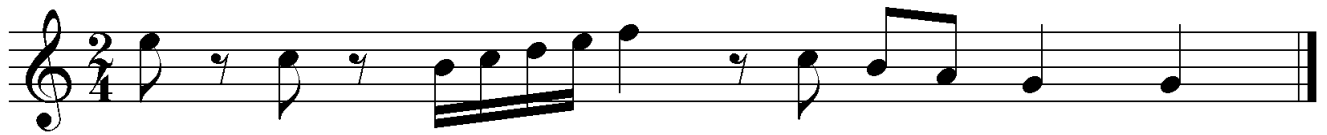
a.



b.



c.



d.



e.



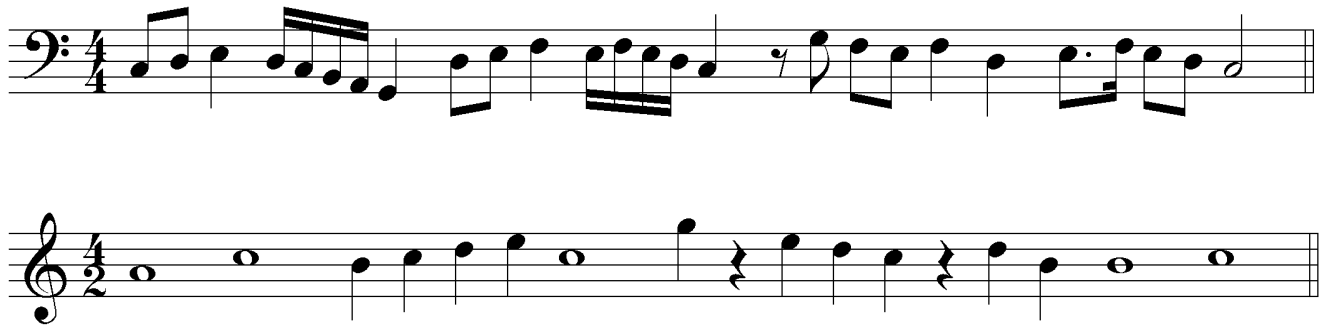
f.





5. The following excerpts have time signatures that use the *half note* as the beat. Write in the time signature, and write the counts underneath. Some of the first line has been done for you.





8. Fill in the blanks.

A time signature with:

a. Two beats, where the quarter note is the beat: \_\_\_\_\_

b. Four beats, where the half note is the beat: \_\_\_\_\_

c. Four beats, where the eighth note is the beat: \_\_\_\_\_

d. Three beats, where the half note is the beat: \_\_\_\_\_

e. Two beats, where the half note is the beat: \_\_\_\_\_

9. The time signatures in some of the bars below are correct, but *some* have errors: their time signatures do not agree with the number of beats in the bar. Draw an 'X' through the incorrect time signatures.



The first row contains four staves: Treble clef, 3/4 time, notes G4, A4, B4, C5; Bass clef, 3/8 time, notes G3, A3, B3, C4; Treble clef, common time, notes G4, A4, B4, C5; Treble clef, 3/4 time, notes G4, A4, B4. The second row contains three staves: Treble clef, 3/8 time, notes G4, A4, B4; Bass clef, 4/2 time, notes G3, A3, B3; Treble clef, 3/2 time, notes G4, A4, B4, C5.

10. Draw a *rest* where indicated, to complete the bar.

The first row contains three staves: Treble clef, 4/4 time, notes G4, A4, B4, C5; Treble clef, 3/4 time, notes G4, A4, B4; Bass clef, 2/2 time, notes G3, A3, B3. The second row contains three staves: Treble clef, 3/8 time, notes G4, A4; Bass clef, 4/2 time, notes G3, A3, B3, C4; Treble clef, 3/4 time, notes G4, A4, B4. The third row contains three staves: Bass clef, 4/8 time, notes G3, A3; Treble clef, 4/4 time, notes G4, A4; Bass clef, 3/2 time, notes G3, A3, B3, C4. The fourth row contains two staves: Bass clef, 2/8 time, notes G3, A3; Treble clef, 4/4 time, notes G4, A4, B4, C5.



# worksheet

## lesson 7: small intervals

1. Write a “C” underneath the semitones below if they are chromatic semitones. Write a “D” if they are diatonic semitones.

A musical staff in treble clef containing seven semitone intervals. The notes are: F#4 to G4, G4 to A♭4, A4 to B♭4, C4 to D4, D4 to E♭4, E4 to F#4, and G4 to A♭4. The last two intervals are positioned below the staff line.

2

- a. Write the note that is a chromatic semitone above the given notes.

A musical staff in bass clef containing six notes: F2, G♭2, A2, B2, C♭3, and D2. The notes are spaced out across the staff.

- b. Write the note that is a chromatic semitone below the given notes.

A musical staff in treble clef containing six notes: D4, E4, F#4, G4, A4, and B4. The notes are spaced out across the staff.

- c. Write the note that is a diatonic semitone above the given notes.

A musical staff in bass clef containing six notes: F2, G2, A2, B2, C3, and D3. The notes are spaced out across the staff.

- d. Write the note that is a diatonic semitone below the given notes.

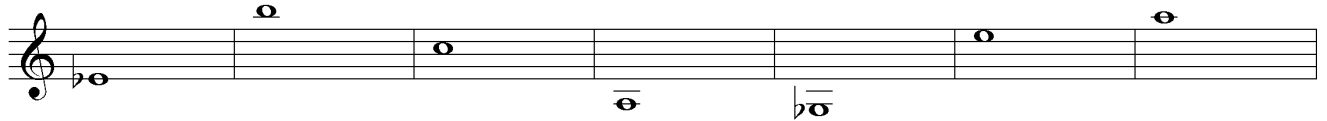
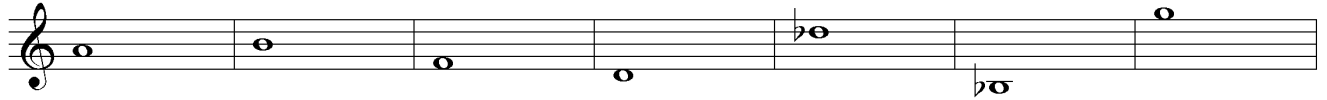
A musical staff in treble clef containing six notes: D4, E4, F4, G♭4, A4, and B4. The notes are spaced out across the staff.

3. Fill in the blanks.

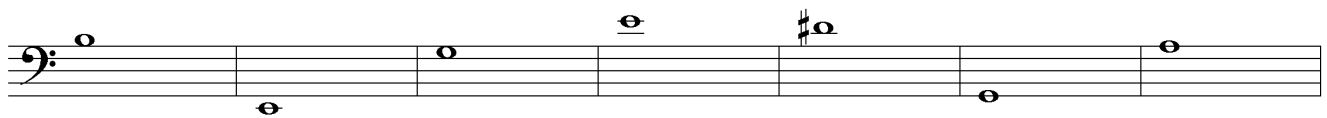
- a. The interval D# to E is a \_\_\_\_\_ semitone.
- b. F to F# is a \_\_\_\_\_ semitone.
- c. A diatonic semitone above E is \_\_\_\_\_.
- d. A chromatic semitone below B is \_\_\_\_\_.
- e. C to C# \_\_\_\_\_ (is / is not) a diatonic semitone.
- f. Eb to E $\flat$  is a \_\_\_\_\_ semitone.
- g. A chromatic semitone above A is \_\_\_\_\_.
- h. A diatonic semitone below \_\_\_\_\_ is G#.
- i. A diatonic semitone above \_\_\_\_\_ is C.
- j. A chromatic semitone above \_\_\_\_\_ is B.
- k. G# to G is a \_\_\_\_\_ semitone.
- l. A diatonic semitone above \_\_\_\_\_ is G.
- m. On a piano keyboard, the notes C# and \_\_\_\_\_ sound the same.
- n. On a piano keyboard, the notes F# and \_\_\_\_\_ sound the same.
- o. A chromatic semitone below D is \_\_\_\_\_.

4

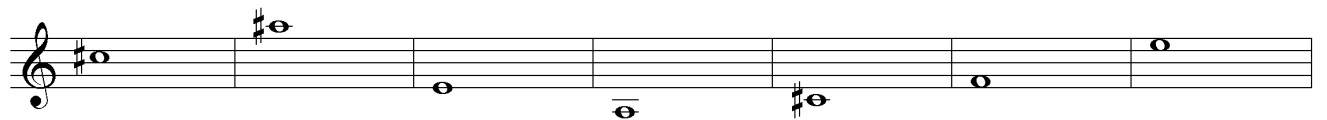
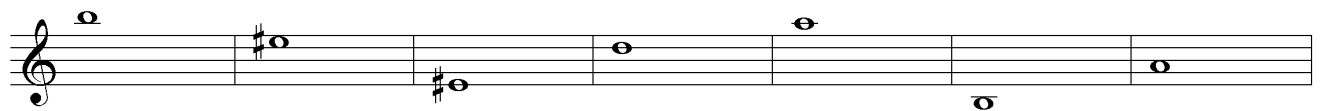
a. Write the note that is a chromatic semitone above the given notes.



b. Write the note that is a chromatic semitone below the given notes.



c. Write the note that is a diatonic semitone above the given notes.



d. Write the note that is a diatonic semitone below the given notes.

Two musical staves in bass clef. The first staff contains seven notes: G<sub>2</sub>, F<sup>#</sup><sub>2</sub>, E<sub>2</sub>, D<sub>2</sub>, C<sub>2</sub>, B<sub>1</sub>, and A<sub>1</sub>. The second staff contains seven notes: G<sup>#</sup><sub>2</sub>, F<sub>2</sub>, E<sub>2</sub>, D<sub>2</sub>, C<sub>2</sub>, B<sub>1</sub>, and A<sub>1</sub>. Each note in the second staff is a diatonic semitone below the corresponding note in the first staff.

5

a. A whole tone is the distance of \_\_\_\_\_ semitone(s).

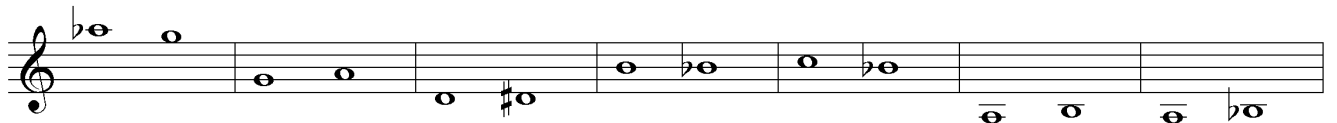
b. Write the note that is one whole tone above the following notes. The first one has been done for you.

Two musical staves. The first staff is in treble clef and contains seven notes: C<sub>4</sub>, D<sub>4</sub>, E<sub>4</sub>, F<sub>4</sub>, G<sub>4</sub>, A<sub>4</sub>, and B<sub>4</sub>. The second staff is in bass clef and contains seven notes: C<sub>3</sub>, D<sub>3</sub>, E<sub>3</sub>, F<sub>3</sub>, G<sub>3</sub>, A<sub>3</sub>, and B<sub>3</sub>. The first note in each staff is already filled in.

c. Write the note that is one whole tone below the following notes. The first one has been done for you.

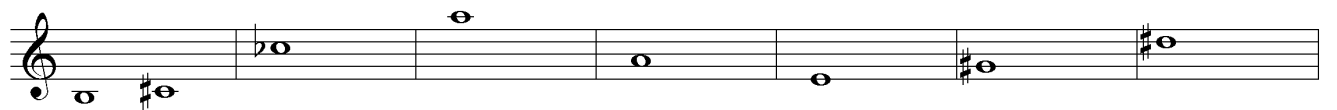
Two musical staves. The first staff is in treble clef and contains seven notes: C<sub>4</sub>, D<sub>4</sub>, E<sub>4</sub>, F<sub>4</sub>, G<sub>4</sub>, A<sub>4</sub>, and B<sub>4</sub>. The second staff is in bass clef and contains seven notes: C<sub>3</sub>, D<sub>3</sub>, E<sub>3</sub>, F<sub>3</sub>, G<sub>3</sub>, A<sub>3</sub>, and B<sub>3</sub>. The first note in each staff is already filled in.

6. Label the intervals below as **chromatic (C)**, **diatonic (D)**, or **whole tones (WT)**.



7

a Write the note that is one whole tone above the following notes. The first one has been done for you.



b. Write the note that is one whole tone below the following notes.

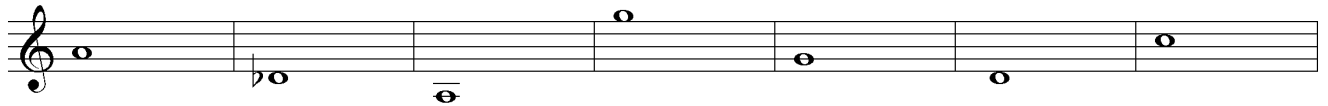
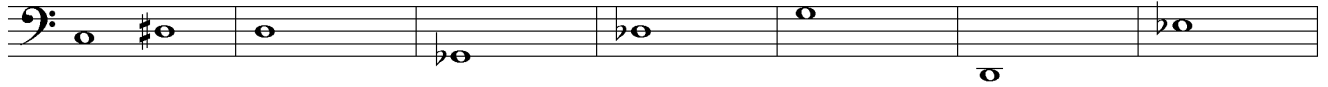
The image shows two musical staves. The top staff is in treble clef and contains seven whole notes: D#4, E#4, F#4, G4, A4, B4, and C5. The bottom staff is in bass clef and contains seven whole notes: C3, D3, E3, F3, G3, A3, and B3.

8. Fill in the blanks.

- A whole tone above \_\_\_\_\_ is D.
- A whole tone below F is \_\_\_\_\_.
- A whole tone above \_\_\_\_\_ is D#.
- A whole tone below Eb is \_\_\_\_\_.
- The interval C# to D is a \_\_\_\_\_ semitone.
- On a piano keyboard, the notes \_\_\_\_\_ and Bb are the same.
- A whole tone below C is \_\_\_\_\_.
- A whole tone above G# is \_\_\_\_\_.
- On a piano keyboard, the notes F and \_\_\_\_\_ are the same.
- A whole tone above F# is \_\_\_\_\_.

9

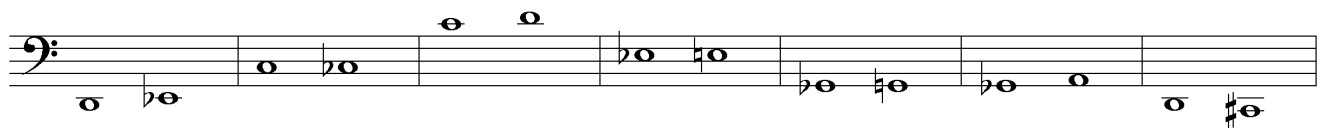
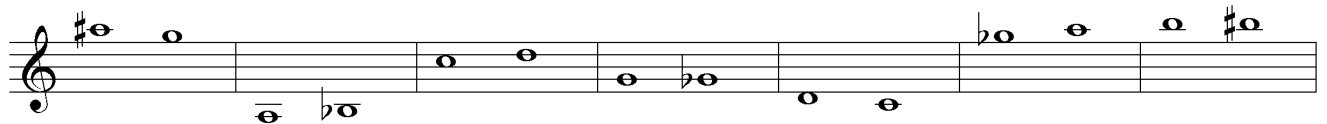
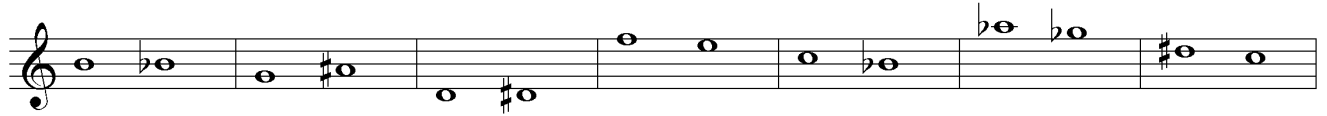
a. Write the note that is a tone-plus-semitone above the given notes. The first one has been done for you.



b. Write the note that is a tone-plus-semitone below the given notes.

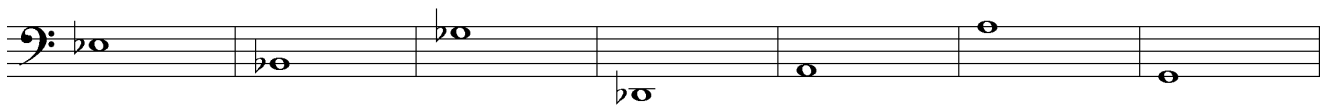


10. Label the intervals below as **chromatic (C)**, **diatonic (D)**, **whole tone (WT)**, or **tone-plus-semitone (TsT)**.



11

a. Write the note that is a tone-plus-semitone above the given notes.



b. Write the note that is a tone-plus-semitone below the given notes.

A musical staff in treble clef with a key signature of one sharp (F#). The notes are: G4 (first line), A4 (first space), B4 (second line), C5 (second space), D5 (third line), E5 (third space), and F#5 (fourth line).

12. Write the intervals as indicated.

chr. st. ↑    d. st. ↓    w.t. ↓    w.t. ↑    t+st ↑    chr. st. ↓    w.t. ↓

A musical staff in treble clef with a key signature of one sharp (F#). The notes are: C4 (first line), D4 (first space), E4 (second line), F4 (second space), G4 (third line), A4 (third space), and B4 (fourth line).

w.t. ↑    d.st. ↑    t+st ↓    d.st. ↑    chr.st ↑    d.st ↓    t+st ↑

A musical staff in bass clef with a key signature of one sharp (F#). The notes are: C3 (first line), D3 (first space), E3 (second line), F3 (second space), G3 (third line), A3 (third space), and B3 (fourth line).

w.t. ↓    d.st. ↓    d.st. ↑    chr.st. ↑    w.t. ↓    t+st ↑    t+st ↓

A musical staff in treble clef with a key signature of one sharp (F#). The notes are: C4 (first line), D4 (first space), E4 (second line), F4 (second space), G4 (third line), A4 (third space), and B4 (fourth line).

chr.st. ↓    d.st. ↑    w.t. ↑    w.t. ↓    d.st. ↑    t+st ↓    chr.st ↑

A musical staff in bass clef with a key signature of one sharp (F#). The notes are: C3 (first line), D3 (first space), E3 (second line), F3 (second space), G3 (third line), A3 (third space), and B3 (fourth line).

w.t. ↑    chr.st. ↓    t+st ↑    d.st. ↓    d.st. ↑    w.t. ↓    w.t. ↑

A musical staff in treble clef with a key signature of one sharp (F#). The notes are: C4 (first line), D4 (first space), E4 (second line), F4 (second space), G4 (third line), A4 (third space), and B4 (fourth line).

chr.st. ↑    chr.st ↓    t+st ↓    d.st ↓    w.t. ↑    t+st ↑    d.st. ↑

A musical staff in bass clef with a key signature of one sharp (F#). The notes are: C3 (first line), D3 (first space), E3 (second line), F3 (second space), G3 (third line), A3 (third space), and B3 (fourth line).



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# worksheet

## lesson 8: major scales

1. Starting on the given note, write seven more notes, on each line and space. The first one has been done for you.

1 2 3 4 5 6 7 8

1 2 3 4 5 6 7 8

1 2 3 4 5 6 7 8

1 2 3 4 5 6 7 8

1 2 3 4 5 6 7 8

1 2 3 4 5 6 7 8

1 2 3 4 5 6 7 8

1 2 3 4 5 6 7 8

2

a. The pattern of tones and semitones that creates a major scale is:

\_\_\_\_\_

b. The pattern of tones and semitones for a descending major scale is:

\_\_\_\_\_

3

a. Here is a C major scale. It uses no sharps, no flats. Between each note, write the letter “T” to represent a tone, or “st” to represent a semitone.

*continue:*

b. Do the same to this descending C major scale. (Hint: the tone-semitone pattern goes backwards!)

4. Draw a line from each note of the F major scale to the corresponding key on the keyboard. Mark the tones with brackets, and the semitones with slurs.

*continue:*

5. In the following scales, brackets and slurs representing tones and semitones appear, but some of the adjustments (accidentals) haven't been made yet. Add the accidentals to make the tone-semitone pattern correct. Then number the notes, and write in the solfa names.

a.

1 2 3 4 5 6 7 1  
do re mi fa so la ti do

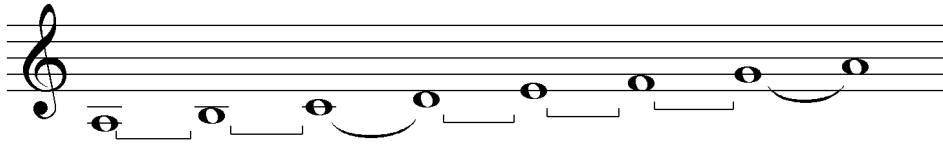
b.

c.

d.

e.

f.



6. Write the following scales in this way:

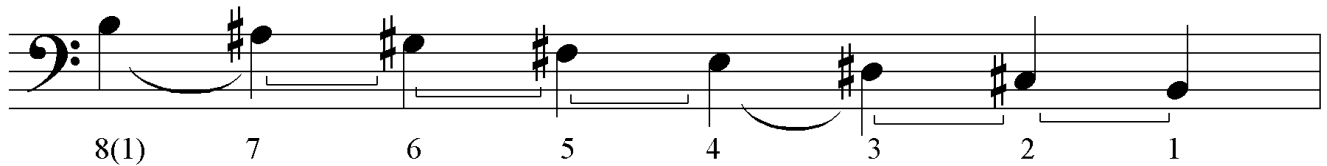
a. Use *quarter* notes, numbering each note, using 8(1) for the final note. Don't forget, in descending scales, the numbering descends as well.

b. Draw in the brackets and slurs to show the tones and semitones.

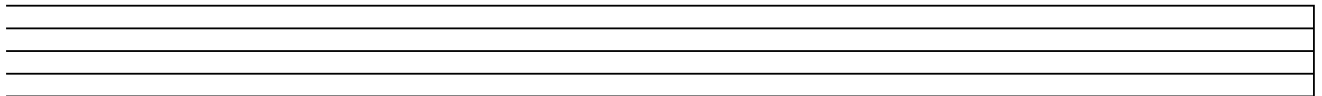
c. Add the accidentals.

The first one has been done for you.

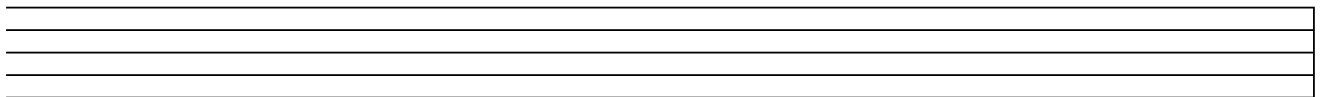
a. B Major, bass clef, descending:



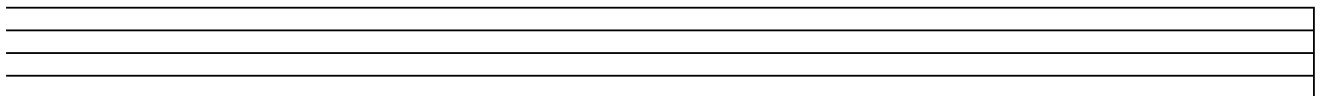
b. Db Major, treble clef, descending:



c. F# Major, treble clef, ascending:



d. Gb Major, bass clef, ascending:



7. Study the tone-semitone patterns of the following scales, and determine which scale is being described (they don't all start on the same note). Then number the notes, and draw a circle around note number 1.

a.

Scale: F Major

3 4 5 6 7 1 2 3

b.

Scale: \_\_\_\_\_

c.

Scale: \_\_\_\_\_

d.

Scale: \_\_\_\_\_

e.

Scale: \_\_\_\_\_

f.

Scale: \_\_\_\_\_

## HINT!

For ascending scales, look for the start of the pattern T, T, ST, T, T, T, ST.

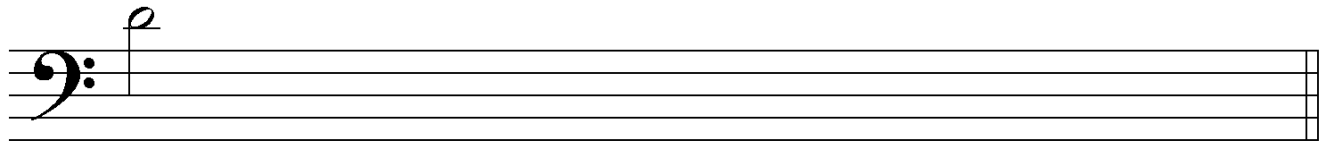
The start of this pattern gives you your first note, which is the name scale. Simply reverse the pattern for descending scales.

8. Name the major scales:

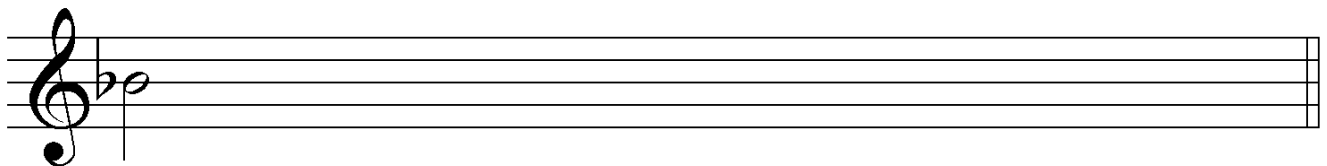
- a. My second note is G: \_\_\_\_\_ Major.
- b. My fifth note is C: \_\_\_\_\_ Major.
- c. My third note is F#: \_\_\_\_\_ Major.
- d. My first note is Ab: \_\_\_\_\_ Major.
- e. My fourth note is D: \_\_\_\_\_ Major.
- f. My third note is G: \_\_\_\_\_ Major.
- g. My seventh note is C#: \_\_\_\_\_ Major.
- h. My sixth note is G: \_\_\_\_\_ Major.
- i. My fifth note is B: \_\_\_\_\_ Major.
- j. My second note is Eb: \_\_\_\_\_ Major.

9. Write the following scales, using half notes, as indicated.

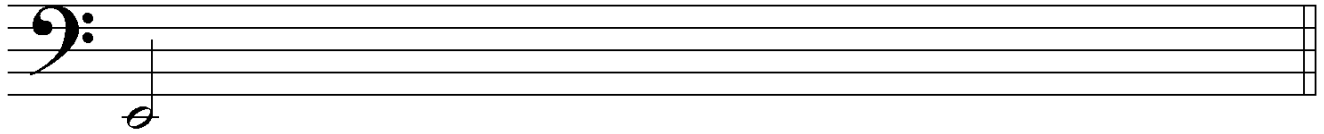
a. D major, descending.



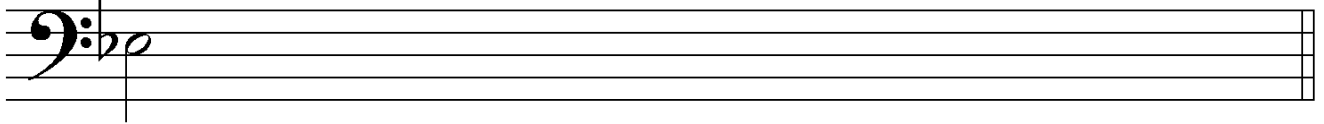
b. Bb major, descending.



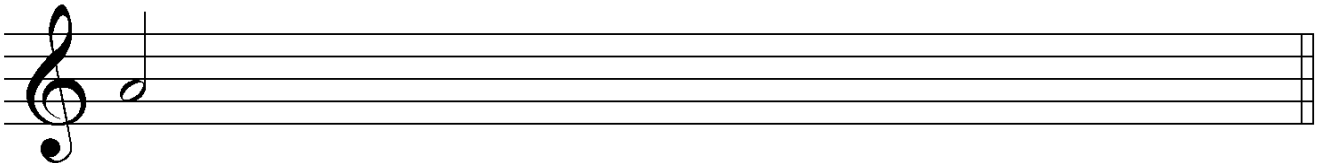
c. E major, ascending.



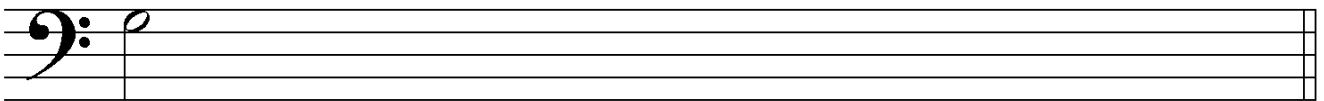
d. Eb major, descending.



e. A major, ascending.

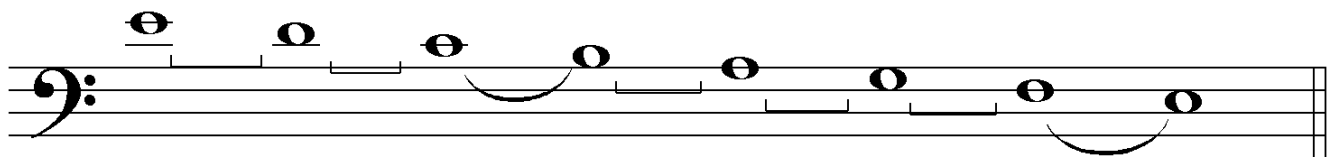


f. G major, descending.



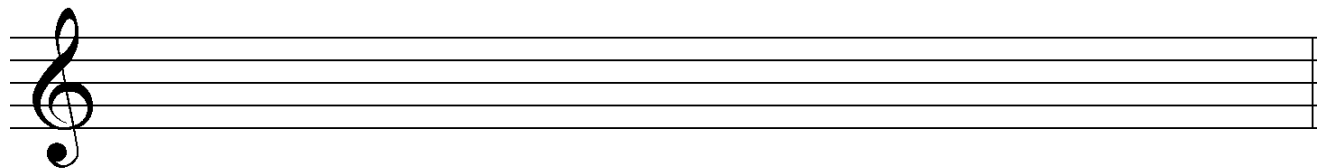
10. Write the following scales using whole notes. Number the notes, draw brackets and slurs, and write in the solfa names. Don't forget to add the accidentals where necessary. The first one is done for you.

a. C major, descending, bass clef, starting on *mi*.

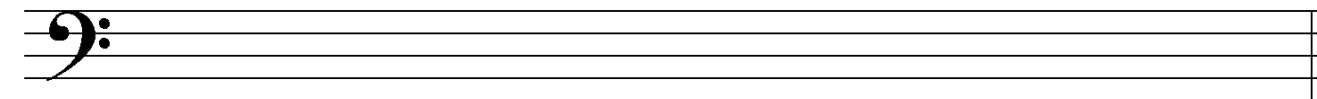


3      2      1      7      6      5      4      3  
mi    re    do    ti    la    so    fa    mi

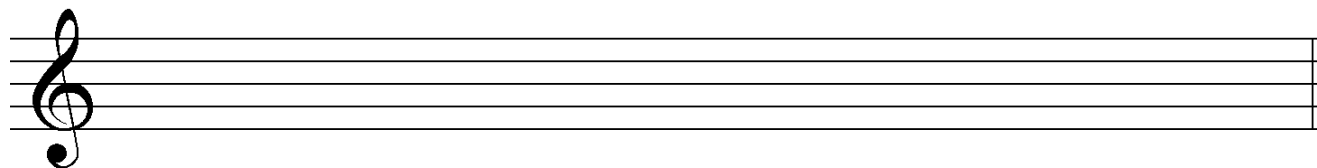
b. Db major, ascending, treble clef, starting on *so*.



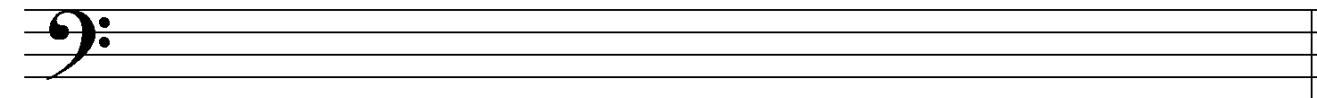
c. A major, descending, bass clef, starting on *ti*.



d. Eb major, ascending, treble clef, starting on *fa*.



e. G major, descending, bass clef, starting on *la*.



---

# worksheet

## lesson 9: key signatures

1

a. Complete the following:

BATTLE \_\_\_\_\_

FATHER \_\_\_\_\_

b. The phrase that begins with the word **Battle** shows us the order of \_\_\_\_\_ in a key signature.

c. The phrase that begins with the word **Father** shows us the order of \_\_\_\_\_ in a key signature.

2. Draw the following key signatures in both the treble and bass clefs.

a. 1 flat

b. 2 sharps

c. 4 flats

d. 7 sharps

e. 7 flats

The image shows five sets of musical staves, each consisting of a treble clef staff on top and a bass clef staff on the bottom. Each set is labeled with a letter: a., b., c., d., and e. The staves are empty, intended for the student to draw the key signature for each of the five cases.

3. Complete the following:

When sharps you see, the last is \_\_\_\_\_.

When flats there are, the last is \_\_\_\_\_.

4. Complete the ascending C major scale below using whole notes. Number the notes. Under the numbers, write the solfa names.

A musical staff in treble clef showing the beginning of an ascending C major scale. The first two notes are whole notes: C4 (middle C) and D4. Below the first note is the number '1' and the solfa name 'do'. Below the second note is the number '2' and the solfa name 're'. The rest of the staff is empty.

5. What major scales are indicated by the following key signatures?

Remember, when flats there are, the last is “fa”.

Four musical staves showing key signatures. The first staff is in treble clef with two sharps (F# and C#) and is labeled 'D major'. The second staff is in treble clef with three flats (Bb, Eb, Ab). The third staff is in treble clef with one sharp (F#). The fourth staff is in bass clef with three flats (Bb, Eb, Ab). Below each staff is a blank line for the answer.

Remember, when sharps you see, the last is “ti”.

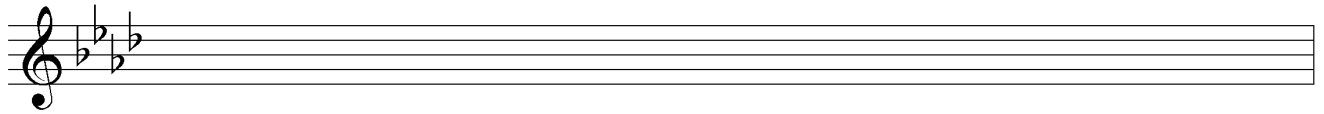
Four musical staves showing key signatures. The first staff is in treble clef with one flat (Bb). The second staff is in bass clef with four sharps (F#, C#, G#, D#). The third staff is in treble clef with three sharps (F#, C#, G#). The fourth staff is in bass clef with two flats (Bb, Eb). Below each staff is a blank line for the answer.

6. There are mistakes in these key signatures. Rewrite the key signatures, correcting the mistakes.

Five pairs of musical staves. Each pair consists of a 'wrong' key signature and a 'correct' key signature. 
 1. Wrong: Treble clef with three sharps (F#, C#, G#). Correct: Treble clef with two sharps (F#, C#).
 2. Wrong: Bass clef with one flat (Bb). Correct: Bass clef with no sharps or flats.
 3. Wrong: Treble clef with three sharps (F#, C#, G#). Correct: Treble clef with two sharps (F#, C#).
 4. Wrong: Treble clef with three flats (Bb, Eb, Ab). Correct: Treble clef with one flat (Bb).
 5. Wrong: Bass clef with one sharp (F#). Correct: Bass clef with no sharps or flats.

7. Write the scales, ascending and descending, as indicated by the key signature.

a.



Here are the steps:

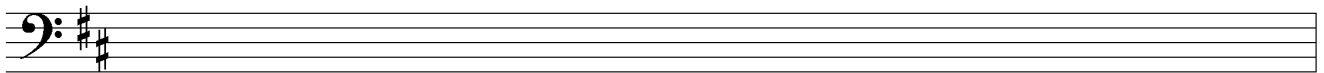
1. **When flats there are, the last is “fa”.** Which note is fa? In this example of four flats, the answer is Db.

2. Counting Db as four (because “fa” is the fourth note of the major scale), count down to one. That gives us Ab.

3. Write an Ab note (second space).

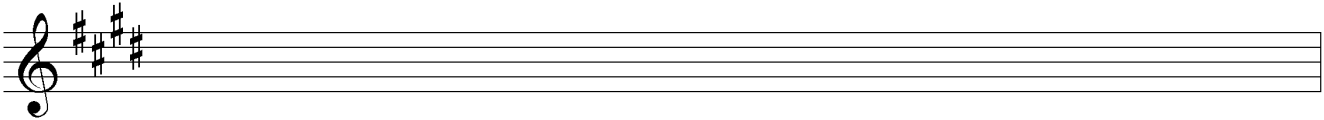
4. Write one octave of notes, ascending. That’s it. You’ve drawn an ascending Ab major scale! Now finish it by drawing the descending scale.

b.

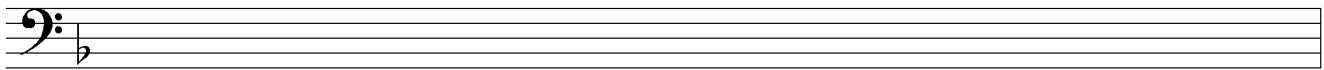


Hint: This one uses sharps, so our first step is “when sharps you see, the last is ti.”

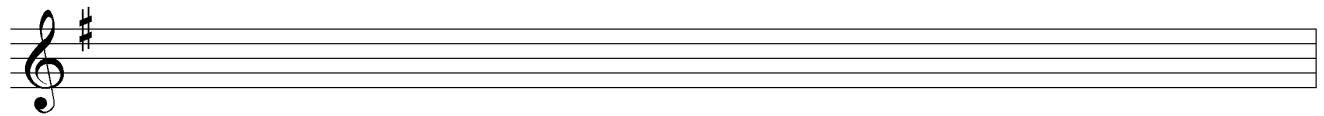
c.



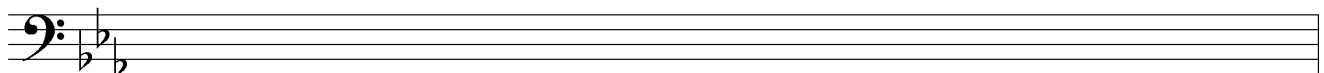
d.



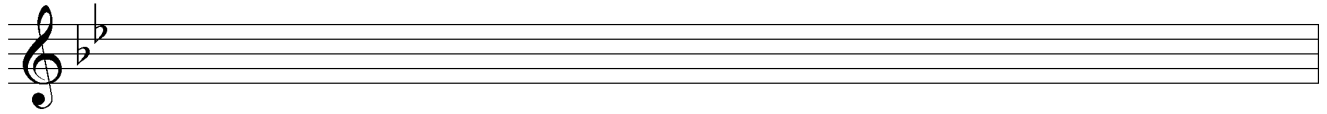
e.



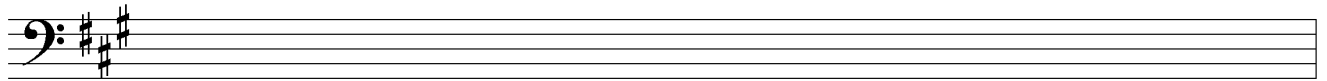
f.



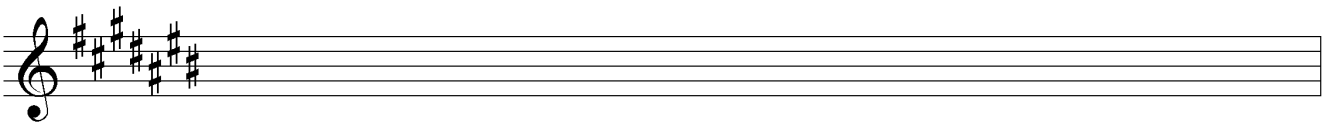
g.



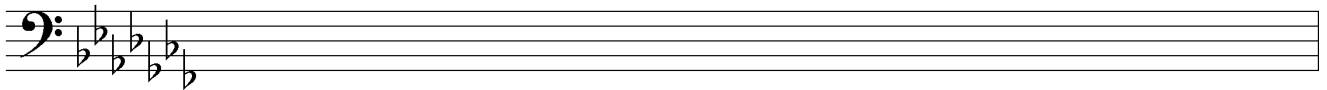
h.



i.



j.



8. Complete the following table.

**To remember:**

Key signatures with sharps:

When sharps you see, \_\_\_\_\_.

Key signatures with flats:

When flats there are, \_\_\_\_\_.

The order of sharps:

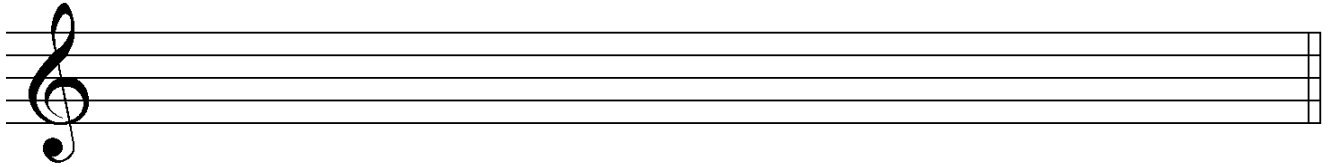
Father \_\_\_\_\_  
\_\_\_\_\_

The order of flats:

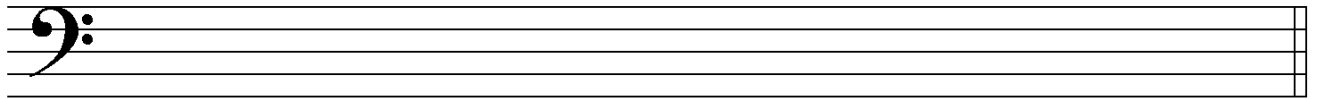
Battle \_\_\_\_\_  
\_\_\_\_\_

9. Write the following scales, ascending, using a key signature, in the clef indicated.

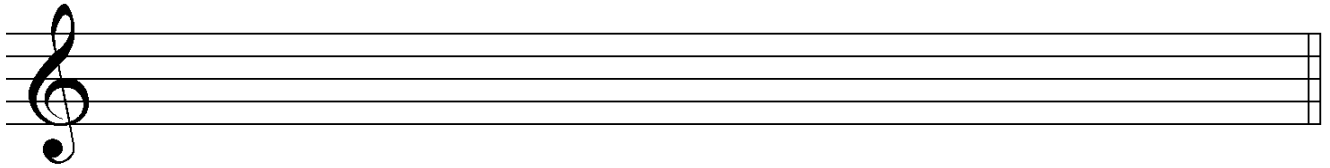
a. E $\flat$



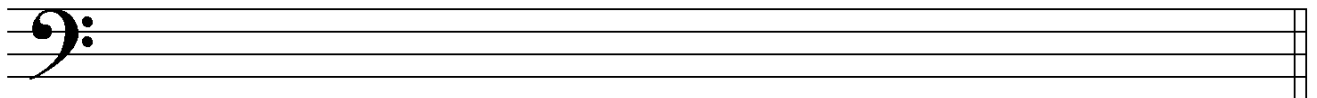
b. E



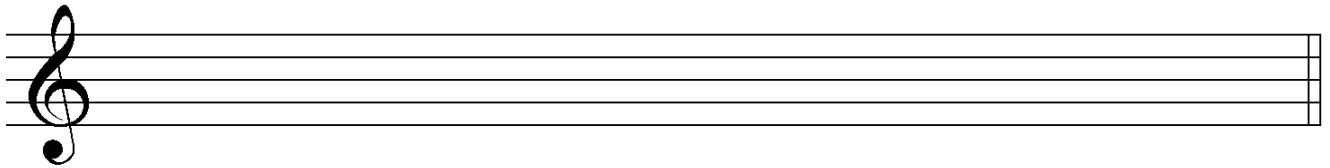
c. A



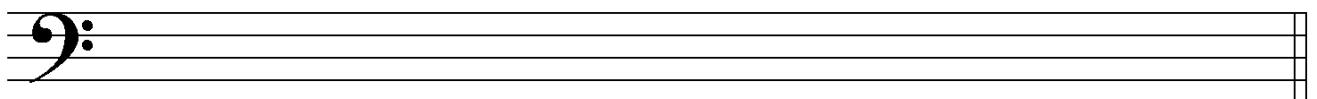
d. C $\sharp$



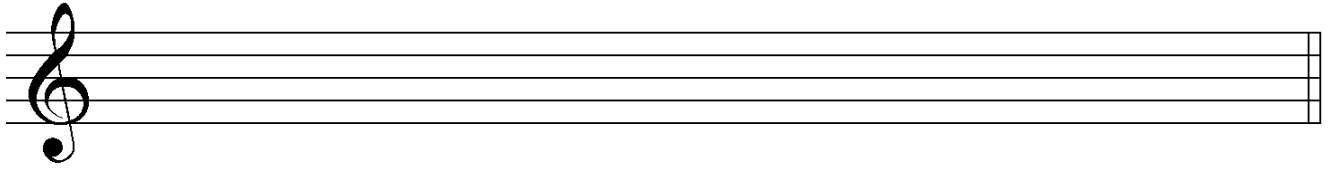
e. F



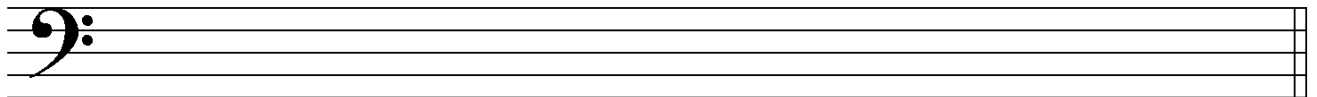
f. A $\flat$



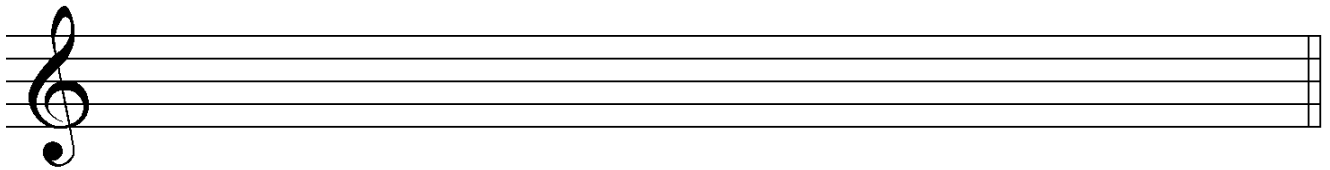
g. D



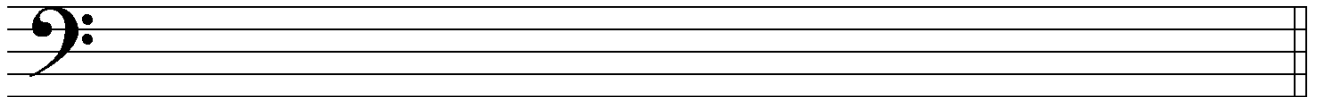
h. Bb



i. Cb



j. G



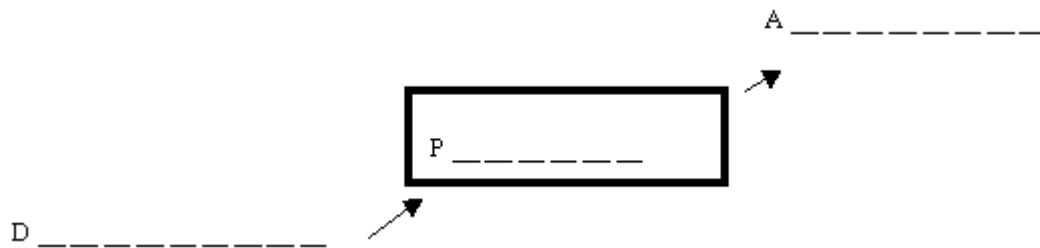
# worksheet

## lesson 10: intervals

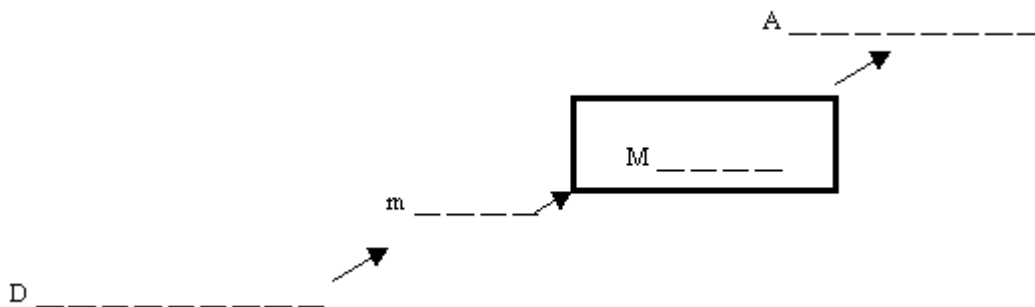
1. Write the correct interval number underneath each interval. The first one is done for you.

2. Write a note above the given note, according to the interval number given. The first one is done for you.

3. With the intervals 1, 4, 5, 8, there are three possible **qualities**:



4. With the intervals 2, 3, 6, or 7, there are four possible **qualities**:



5.

a. With the intervals 1, 4, 5, or 8, if the upper note is in the major key of the bottom note, the quality of the interval is \_\_\_\_\_.

b. With the intervals 2, 3, 6, or 7, if the upper note is in the major key of the bottom note, the quality of the interval is \_\_\_\_\_.

6. All of the top notes in the following intervals are in the major scales of the bottom notes, so they are either **major** or **perfect**. Label them as M (major) or P (perfect). The first one is done for you.

Row 1: M6    \_\_\_3    \_\_\_6    \_\_\_5    \_\_\_7    \_\_\_4    \_\_\_2  
 Row 2: \_\_\_5    \_\_\_4    \_\_\_2    \_\_\_4    \_\_\_7    \_\_\_7    \_\_\_2

7. Identify the intervals and their **quality** where indicated. For quality, use + for major, - for minor, ° for diminished, and x for augmented.

\_\_\_\_\_ +3      \_\_\_\_\_ P4      \_\_\_\_\_ +7

\_\_\_\_\_ P5      \_\_\_\_\_ +2      \_\_\_\_\_ +6

8. Write the following major scales (use key signatures).

a. Bb+, quarter notes, descending:

b. E+, eighth notes, ascending:

c. C#+, whole notes, ascending:

d. Gb+, whole notes, descending:

9. Write the following interval numbers and the interval quality (P5, +3, etc.) underneath each interval. To determine quality, remember to ask if the top note is in the major scale of the bottom note.

a.

b.

c.

d.

10. Write the note below the given note according to the *number* of the interval.

# worksheet

11. Write the note below the given note according to the *number* and *quality* of the interval.

+3      P5      +3      dim5      +7      -7      -3

+2      P4      -6      -3      P5      +6      dim5

+2      +3      -6      P8      P4      -7      -3

+3      -2      Aug5      +3      -6      P4      -7

12. The following intervals are either **diminished** or **augmented**. Write the interval quality under each interval. Use **dim.** for diminished, and **aug.** for augmented.

13. Write the following intervals.

Interval notation for Treble clef staff 1:

- Measure 1: -3↑
- Measure 2: °3↓
- Measure 3: +6↓
- Measure 4: P4↑
- Measure 5: P8↑
- Measure 6: -2↑
- Measure 7: X5↓
- Measure 8: °7↓

Interval notation for Bass clef staff 2:

- Measure 1: +3↑
- Measure 2: °6↓
- Measure 3: P5↓
- Measure 4: -6↑
- Measure 5: -7↑
- Measure 6: +7↓
- Measure 7: °3↑
- Measure 8: X4↓

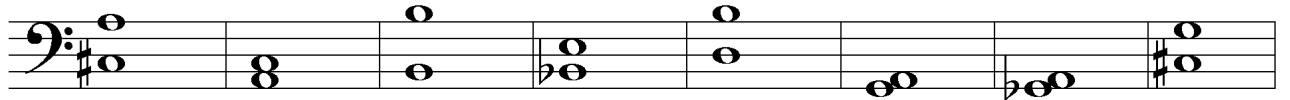
Interval notation for Treble clef staff 3 (Key signature: one sharp):

- Measure 1: P8↑
- Measure 2: °6↓
- Measure 3: P5↓
- Measure 4: -3↓
- Measure 5: °4↑
- Measure 6: +7↑
- Measure 7: P4↑
- Measure 8: X4↑

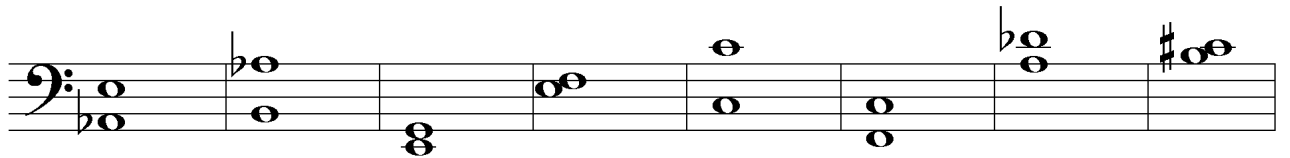
Interval notation for Bass clef staff 4 (Key signature: one flat):

- Measure 1: °3↓
- Measure 2: X6↑
- Measure 3: -3↓
- Measure 4: -7↑
- Measure 5: +2↓
- Measure 6: X4↓
- Measure 7: °7↑
- Measure 8: +3↓

14. Identify the following intervals. Write your answer under each interval. The first one is done for you.



-6





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# w o r k s h e e t

## lesson 11: inverting intervals

1. Complete the following.

When you invert 1, it becomes 8.

When you invert 2, it becomes \_\_\_\_.

When you invert 3, it becomes \_\_\_\_.

When you invert 4, it becomes \_\_\_\_.

When you invert 5, it becomes \_\_\_\_.

When you invert 6, it becomes \_\_\_\_.

When you invert 7, it becomes \_\_\_\_.

When you invert 8, it becomes \_\_\_\_.

2. Complete the following.

When you invert Major, it becomes \_\_\_\_\_.

When you invert minor, it becomes \_\_\_\_\_.

When you invert perfect, it becomes \_\_\_\_\_.

When you invert diminished, it becomes \_\_\_\_\_.

When you invert augmented, it becomes \_\_\_\_\_.

3. Take the following intervals and invert them using the two methods described in the lesson.

a. Write the note *below* the given one, according to the interval specified. The first one is done for you.

M3                  m7                  P4                  M7                  P5                  X4

b. Now invert the interval by moving the *top* note down one octave. The first one is done for you. Notice in the first one that the major interval has inverted to minor, and the third has inverted to a sixth.

m6                  M2                  P5                  m2                  P4                  °5

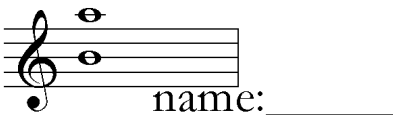
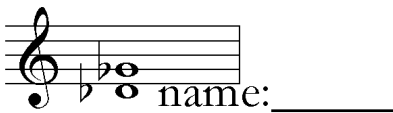
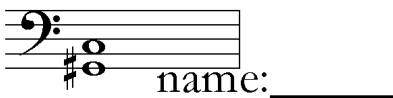
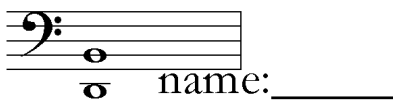
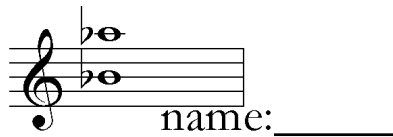
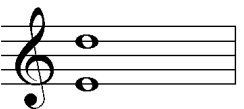
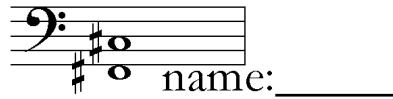
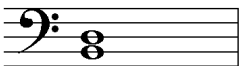
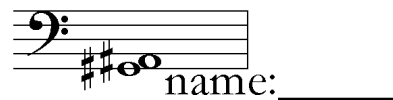
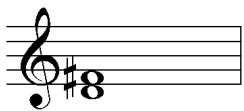
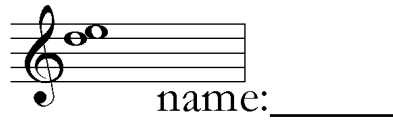
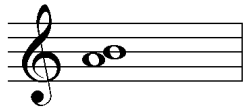
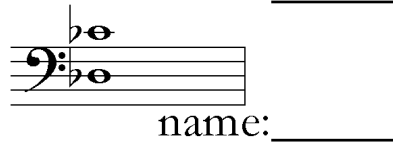
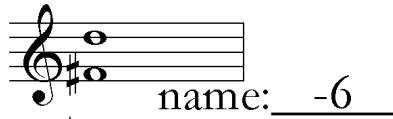
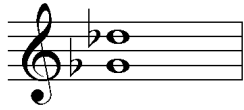
c. Take the music in part 'a' again, and this time, leave the top note where it is, and move the bottom note *up* an octave. The first one is done for you.

m6                  M2                  P5                  m2                  P4                  °5

4. Supply the **inversion** of the given interval.

- a. P4: \_\_\_\_\_.
- b. M6: \_\_\_\_\_.
- c. m3: \_\_\_\_\_.
- d. m2: \_\_\_\_\_.
- e. Aug 4: \_\_\_\_\_.
- f. P8: \_\_\_\_\_.
- g. P5: \_\_\_\_\_.
- h. m7: \_\_\_\_\_.
- i. M7: \_\_\_\_\_.
- j. Aug 6: \_\_\_\_\_.

5. Draw a line from the intervals on the left, to the correct inversions on the right. Name the intervals in the space on the right. The first one is done for you.



6. Invert the given interval by moving the bottom note *up* one octave. Then name both intervals. The first one is done for you.

-3    +6    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_

\_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_

\_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_

\_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_

7. Invert the given interval by moving the top note *down* one octave. Then name both intervals.

The exercises consist of four rows of musical notation. Each row contains four staves, each with a pair of notes forming an interval. Below each staff are two blank lines for the student to write the names of the original and inverted intervals.

- Row 1: Bass clef, G2 and G3; Treble clef, G4 and G5; Treble clef, G4 and G5; Bass clef, G2 and G3.
- Row 2: Bass clef, G2 and G3; Bass clef, G2 and G3; Treble clef, G4 and G5; Bass clef, G2 and G3.
- Row 3: Treble clef, G4 and G5; Bass clef, G2 and G3; Treble clef, G4 and G5; Treble clef, G4 and G5.
- Row 4: Bass clef, G2 and G3; Bass clef, G2 and G3; Bass clef, G2 and G3; Treble clef, G4 and G5.

8. Fill in the blanks.

- A major sixth is the inversion of a \_\_\_\_\_ third.
- A minor second is the inversion of a major \_\_\_\_\_.
- A \_\_\_\_\_ seventh is the inversion of an augmented second.
- A perfect \_\_\_\_\_ is the inversion of a perfect fourth.
- A minor third above the note C is \_\_\_\_\_.
- A major second below G is \_\_\_\_\_.
- A \_\_\_\_\_ sixth is the inversion of a major third.

h. A major seventh below  is 

i. A diminished \_\_\_\_\_ is the inversion of an augmented fourth.

j. An augmented \_\_\_\_\_ is the inversion of a diminished third.

9. With the following intervals, do the following:

- Name the given intervals.
- Invert them, using either method.
- Name the inverted intervals.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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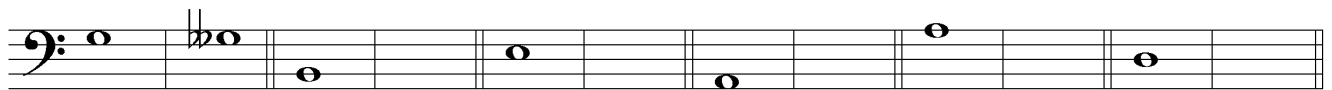
# worksheet

## lesson 12: minor scales

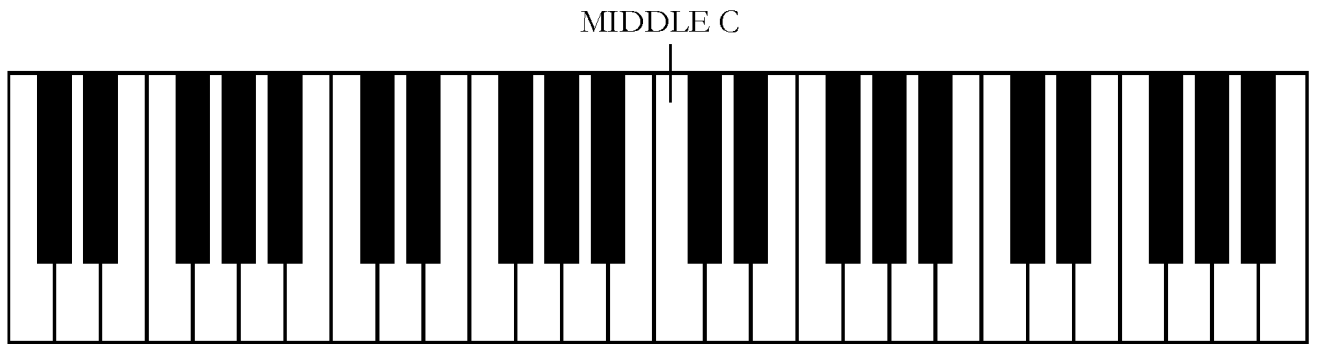
1. Write the note that is two semitones *higher* than the given note, *but use the same letter name*. (The first one is done for you.)



2. Write the note that is two semitones *below* the given note, using the *same* letter name. (The first one is done for you.)



3. Draw a line from each note on the staff to the correct key on the keyboard.



4. For each of the following major scales, write the **submediant** note (i.e., the *sixth* note).

- |                                |                                |
|--------------------------------|--------------------------------|
| a. C Major: <u>   A   </u>     | f. D Major: <u>          </u>  |
| b. F Major: <u>          </u>  | g. F# Major: <u>          </u> |
| c. E Major: <u>          </u>  | h. A Major: <u>          </u>  |
| d. Bb Major: <u>          </u> | i. Ab Major: <u>          </u> |
| j. Gb Major: <u>          </u> |                                |

5. Write the following major scales **ascending**. Then create a relative minor scale (**natural** minor) for each one. Number each note, and write the solfa names under each note. Use a key signature. The first one is started for you.

C+	F+
relative minor: <u>          </u>	relative minor: <u>          </u>

D+	Eb+
relative minor: <u>          </u>	relative minor: <u>          </u>

B+
relative minor: <u>          </u>

6. For the following major scales, write the relative minor in the blank.

a. Db Major; \_\_\_\_\_

b. G Major, \_\_\_\_\_

c. C# Major, \_\_\_\_\_

d. B Major, \_\_\_\_\_

e. Cb Major, \_\_\_\_\_



Your understanding of music theory depends, in large part, on your understanding of scales. Do yourself a favour: write scales every day as practice. You will reap the benefits!

# worksheet

7. Turn the following **natural** minor scales into **harmonic** minor scales by adding the proper accidental. Write the correct solfa name under the adjusted note.



G minor

la ti do re mi fa si la

The musical staff shows the G minor scale in treble clef with a key signature of two flats. The notes are la, ti, do, re, mi, fa, si, la. The 'si' note is circled and has a question mark above it.

C minor

la ti do re mi fa \_ la

The musical staff shows the C minor scale in bass clef with a key signature of three flats. The notes are la, ti, do, re, mi, fa, a blank space, la.

F# minor

la ti do re mi fa \_ la

The musical staff shows the F# minor scale in bass clef with a key signature of three sharps. The notes are la, ti, do, re, mi, fa, a blank space, la.

G# minor

la ti do re mi fa \_ la

The musical staff shows the G# minor scale in treble clef with a key signature of four sharps. The notes are la, ti, do, re, mi, fa, a blank space, la.

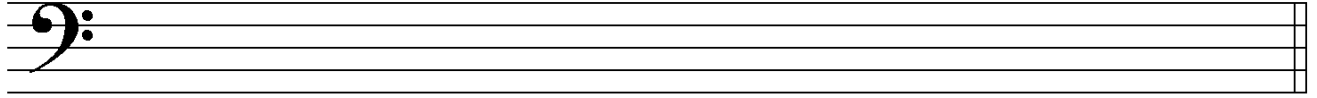
E minor

la ti do re mi fa \_ la

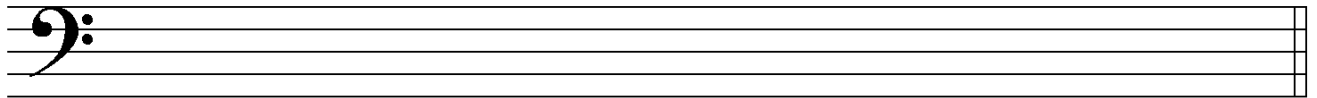
The musical staff shows the E minor scale in treble clef with a key signature of one sharp. The notes are la, ti, do, re, mi, fa, a blank space, la.

8. Write the following scales, ascending *and* descending. Use a key signature. Write the solfa names under each note.

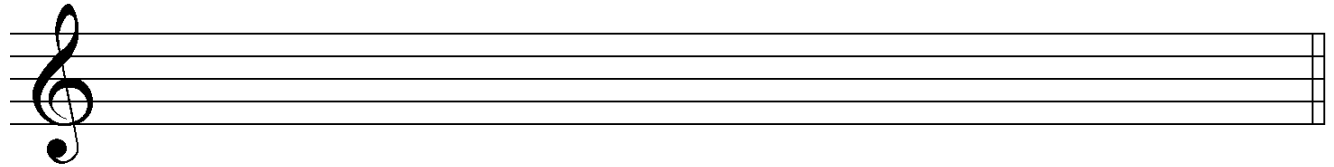
a. A melodic minor:



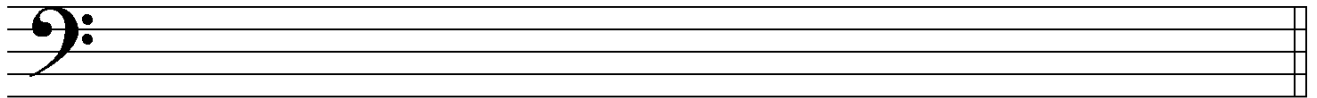
b. Eb melodic minor:



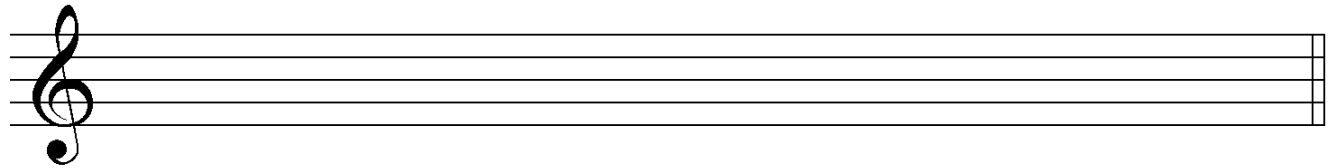
c. D melodic minor:



d. B melodic minor:

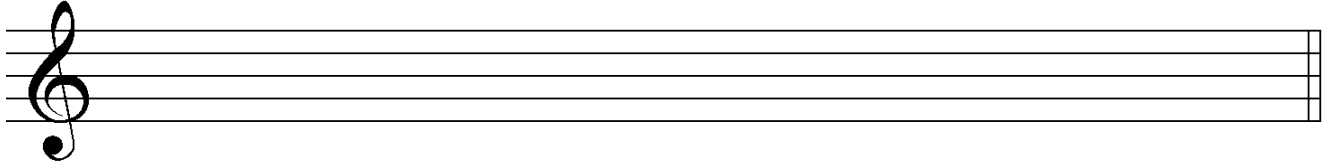


e. F melodic minor:

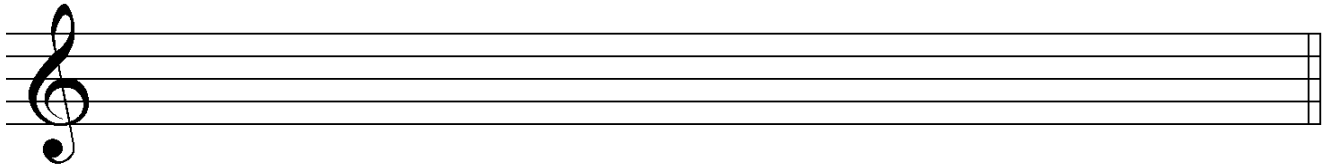


9. Write the requested major scales. Use a key signature. Then write the three forms of relative minor.

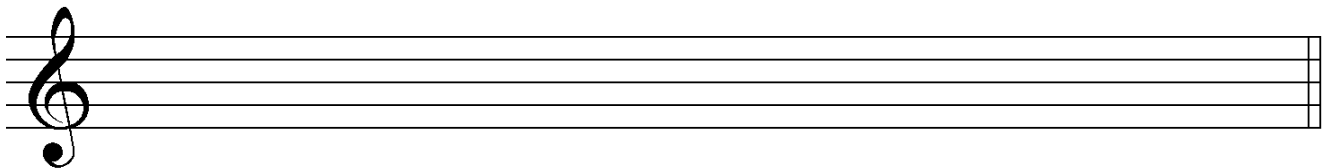
a. B Major, ascending:



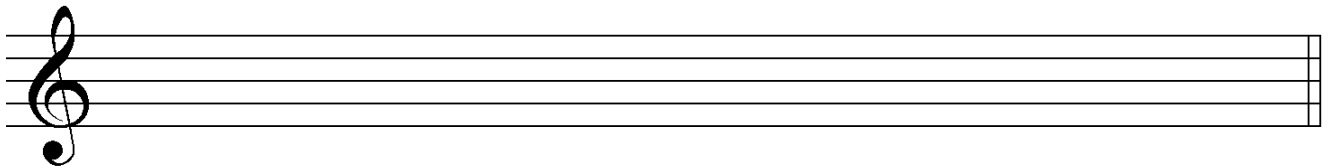
Relative minor: \_\_\_\_\_, natural form, ascending:



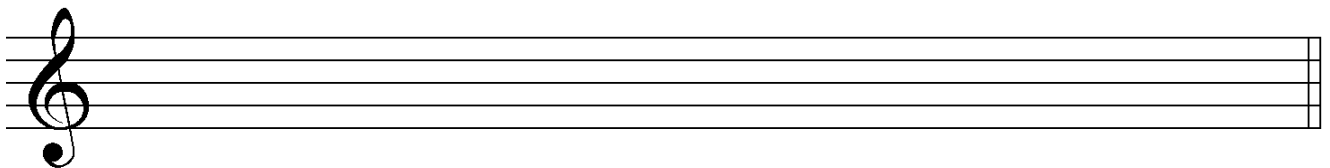
Harmonic form, ascending:



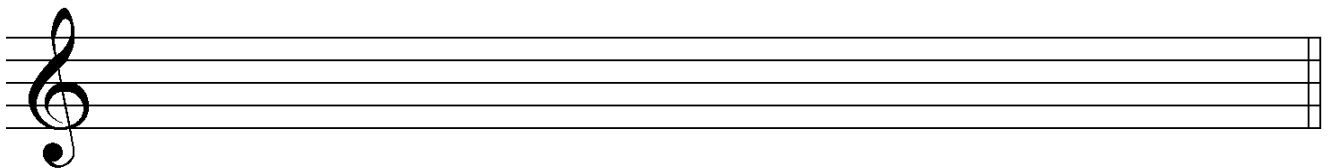
Melodic form, ascending and descending



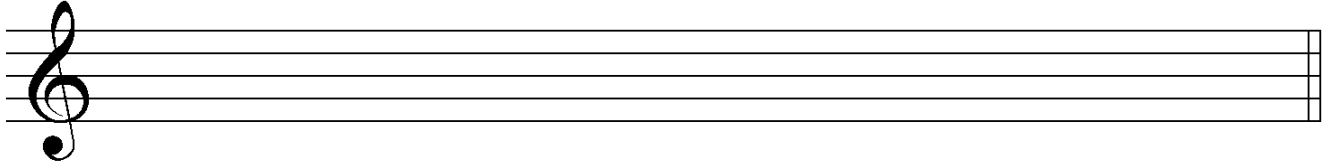
b. G Major, ascending:



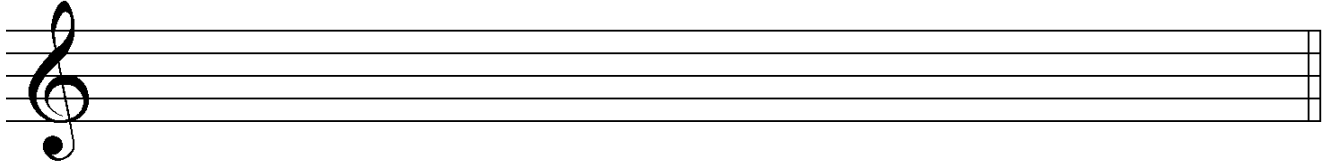
Relative minor: \_\_\_\_\_, natural form, ascending:



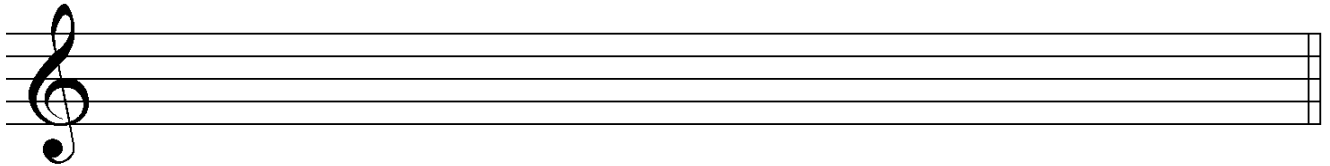
Harmonic form, ascending:



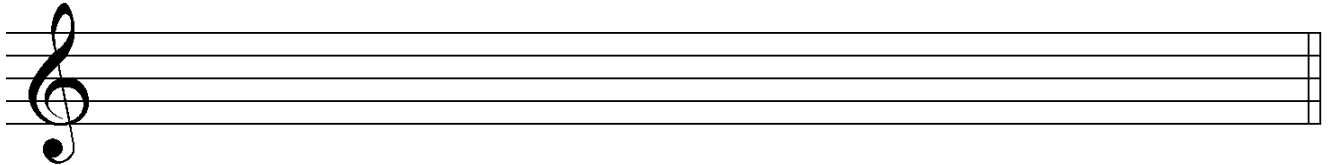
Melodic form, ascending and descending



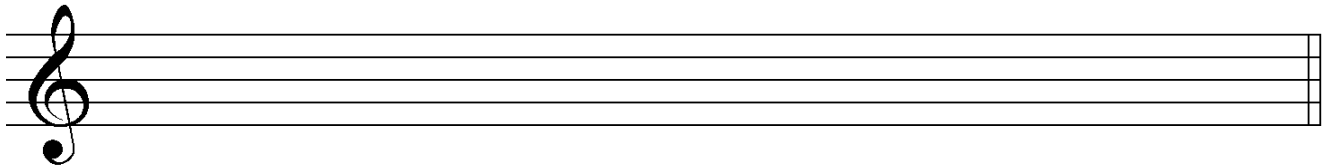
c. E Major, ascending:



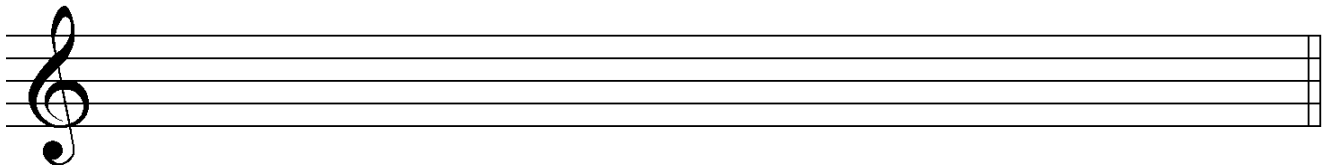
Relative minor: \_\_\_\_\_, natural form, ascending:



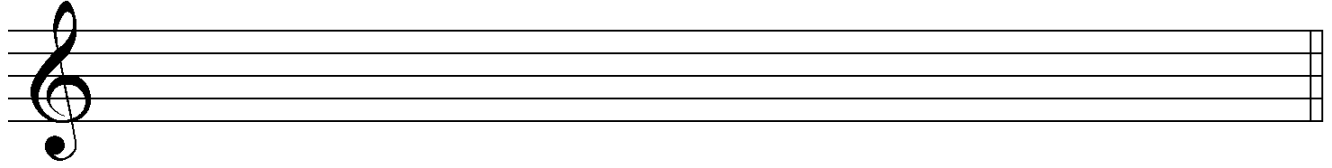
Harmonic form, ascending:



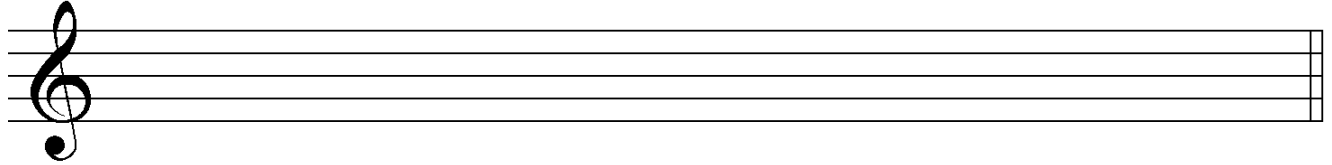
Melodic form, ascending and descending



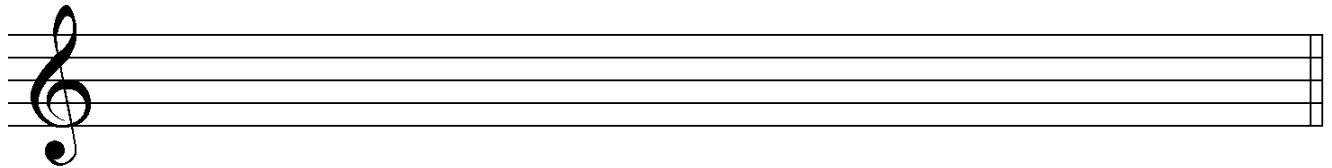
d. Db Major, ascending:



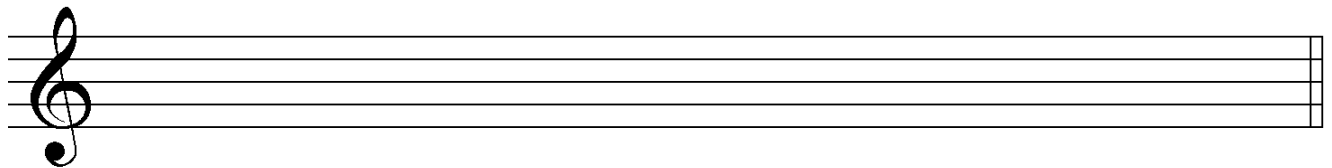
Relative minor: \_\_\_\_\_, natural form, ascending:



Harmonic form, ascending:



Melodic form, ascending and descending



10. For each key signature, write the major and minor key. (The first one is done for you.)

Major: F    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_

minor: D    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_

etc...

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

11. Write the requested minor scales. Then write the relative major scale for each one. Use a key signature Write solfa names under each note.

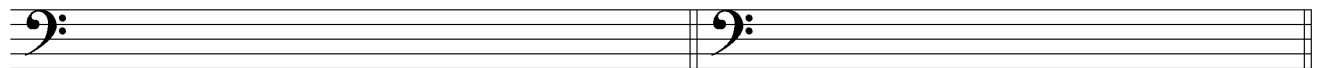
a. G-, natural form, descending:

relative major: \_\_\_\_\_



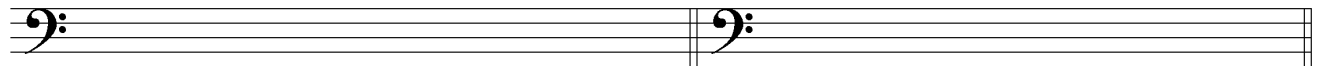
b. C-, harmonic form, descending:

relative major: \_\_\_\_\_



c. F#-, melodic form, ascending only:

relative major: \_\_\_\_\_



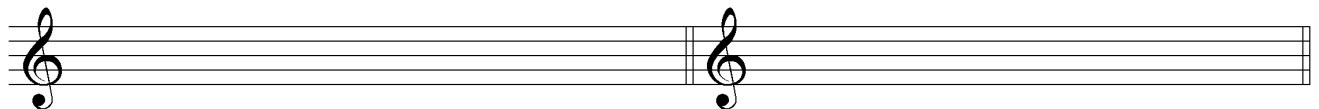
d. G#-, natural form, ascending:

relative major: \_\_\_\_\_



e. E-, natural form, descending:

relative major: \_\_\_\_\_





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# worksheet

## lesson 13: time signatures

1. Label the music by drawing lines from the words on the right to the proper musical features:



- Clef
- Time signature
- First bar
- Second bar
- Bar line
- Final double bar line

2. Fill in the blanks:

Simple time signatures tell us how many \_\_\_\_\_ are in each bar.

Compound time signatures tell us the number of \_\_\_\_\_ (*two words*) in each bar.

In simple time, the top number is *not* evenly divisible by the number \_\_\_\_\_.

In compound time, the top number *is* evenly divisible by the number \_\_\_\_\_.

In simple time, the beat is a(n) \_\_\_\_\_ (*dotted/undotted?*) note.

In compound time, the beat is a(n) \_\_\_\_\_ (*dotted/undotted?*) note.

In simple time, the beat breaks down into \_\_\_\_\_ parts.

In compound time, the beat breaks down into \_\_\_\_\_ parts.

3. Here are some time signatures. Place an S after the ones that are usually **simple** time signatures, and a C after the ones that are **compound**:

Remember: Is the top number evenly divisible by 3?



$\frac{12}{8}$  \_\_\_\_\_

$\frac{4}{8}$  \_\_\_\_\_

$\frac{6}{8}$  \_\_\_\_\_

$\frac{8}{8}$  \_\_\_\_\_

$\frac{2}{2}$  \_\_\_\_\_


$\frac{4}{4}$  \_\_\_\_\_

$\frac{9}{16}$  \_\_\_\_\_

$\frac{3}{4}$  \_\_\_\_\_

Be careful of this one!

4. Here are some **simple** time signatures. Write the number of beats you would find in each bar, in the first space following the time signature. Then draw the kind of note that gets the beat (**Reminder: C means 4/4 time!**) The first one is done for you:

$\frac{4}{4} = 4$  

$\frac{8}{8} =$  \_\_\_\_\_

$\frac{2}{2} =$  \_\_\_\_\_

**C** = \_\_\_\_\_

Remember: The top number tells the number of beats, and the bottom number is a code for the *kind* of note that gets the beat.

5. In the following musical excerpts, draw in the missing bar lines, then finish indicating the beats above each bar:

Remember: 2/4 means that every bar has two beats, and the quarter note gets the beat!



continue:

Draw a "final"  
double barline:

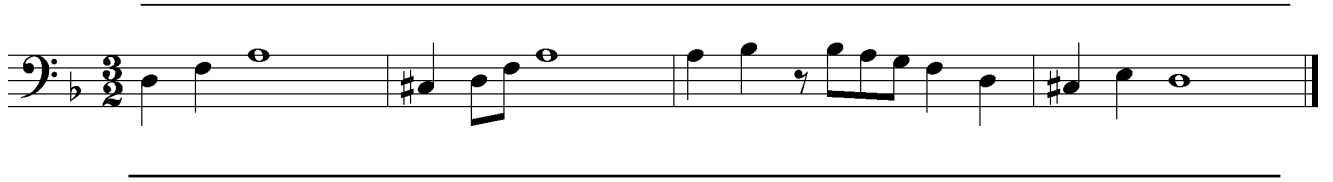
6. Here are some **compound** time signatures. Write the number of beats you would find in each bar, in the first space following the time signature. Then draw the kind of note that gets the beat. The first one is done for you. (To get the number of beats, divide the top number by 3.)

$\frac{6}{8} = 2 \bullet$     
  $\frac{9}{16} = \underline{\quad}$     
  $\frac{12}{8} = \underline{\quad}$     
  $\frac{6}{4} = \underline{\quad}$

7. In the following musical excerpts, draw in the missing bar lines, then finish by indicating the breakdown notes below each bar: Draw a final double bar line. The first bar is done for you.



c.



A single staff of music in bass clef, 3/4 time signature, with a key signature of one flat (Bb). The melody consists of the following notes: G2 (quarter), A2 (quarter), Bb2 (half), C3 (quarter), D3 (quarter), E3 (quarter), F3 (quarter), G3 (quarter), A3 (quarter), Bb3 (quarter), C4 (half). The staff is followed by a blank line for writing.

10. Re-write the following excerpts, properly beaming the flagged notes if possible. **Remember: the beams should correctly reflect the beats.** Then, write the beats above, and the breakdown below, each excerpt:

a.



Two staves of music in bass clef, 6/8 time signature, with a key signature of one flat (Bb). The top staff contains a melody with several groups of beamed notes. The bottom staff is blank for writing.

b.



Two staves of music in treble clef, 3/4 time signature, with a key signature of two flats (Bb, Eb). The top staff contains a melody with several groups of beamed notes. The bottom staff is blank for writing.

**REMEMBER:** Once you've beamed, make sure the stem direction is correct. For a group of beamed notes, find the note that is the furthest from the middle line. The stems should go in the direction appropriate for that note.



c.

d.

11. Look at the four musical excerpts from the previous question. Indicate whether each one is an example of **simple** or **compound** time:

Excerpt a. \_\_\_\_\_                      Excerpt c. \_\_\_\_\_  
 Excerpt b. \_\_\_\_\_                      Excerpt d. \_\_\_\_\_

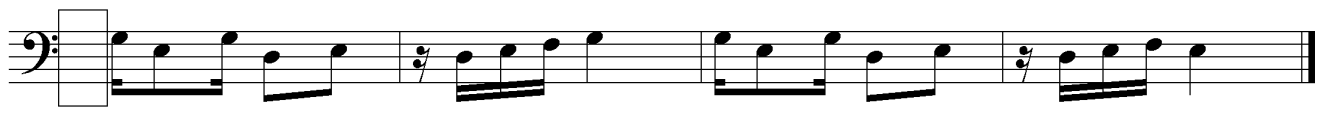
12. The following musical excerpts don't have time signatures written in. Study each excerpt and decide first if it is simple or compound. Then draw in the beats, the breakdown, and then the time signature. (The first one has been started for you.)

Beats: etc.

Breakdown: etc.

# worksheet

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# worksheet

## lesson 14: measure completion



**REMEMBER:** When completing a bar with rests, always complete the beats that have been started for you first—then put in rests for the remaining beats.

1. Correctly label each of the following time signatures as being either simple (S) or compound (C):

$\frac{4}{2}$  \_\_\_\_\_

$\frac{3}{8}$  \_\_\_\_\_

$\frac{4}{8}$  \_\_\_\_\_

$\frac{4}{4}$  \_\_\_\_\_

$\frac{6}{8}$  \_\_\_\_\_

$\frac{12}{4}$  \_\_\_\_\_

C \_\_\_\_\_

$\frac{6}{4}$  \_\_\_\_\_

$\frac{6}{8}$  \_\_\_\_\_

$\frac{3}{4}$  \_\_\_\_\_

$\frac{4}{8}$  \_\_\_\_\_

2. Complete the sentences:

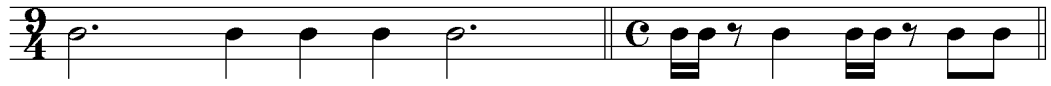
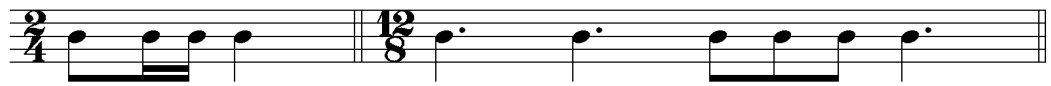
- a. In  $4/4$  time, there are \_\_\_\_\_ beats in every bar, and the \_\_\_\_\_ note gets the beat.
- b. In \_\_\_\_\_ time, there are six eighth-note breakdown notes, grouped in threes.
- c. In  $12/8$  time, there are \_\_\_\_\_ beats in every bar, and the \_\_\_\_\_ note gets the beat.
- d. In  $3/2$  time, there are \_\_\_\_\_ breakdown notes in each bar.
- e. In \_\_\_\_\_ time, there are six eighth-note breakdown notes in each bar, grouped in twos.
- f. In  $6/4$  time, there are \_\_\_\_\_ beats in each bar, subdivided into quarter notes.
- g. In \_\_\_\_\_ time, there are four quarter-note beats.
- h. In \_\_\_\_\_ time, there are four  $16^{\text{th}}$ -note breakdown notes, grouped in two.
- i. In  $9/8$  time, there are three dotted- \_\_\_\_\_ beats.

3. Draw the beats above and the breakdown below each excerpt.

Beat



Breakdown



4. Each of the following excerpts has rests missing. Draw the beat and the breakdown. Then fill in the missing rests where indicated by the bracket. (The first rest is added for you.)

5. Draw the type of note that gets the beat. (The first one is done for you.)

$\frac{4}{8}$   \_\_\_\_\_

$\frac{9}{4}$  \_\_\_\_\_

$\frac{12}{4}$  \_\_\_\_\_

$\frac{3}{2}$  \_\_\_\_\_

$\frac{3}{4}$  \_\_\_\_\_

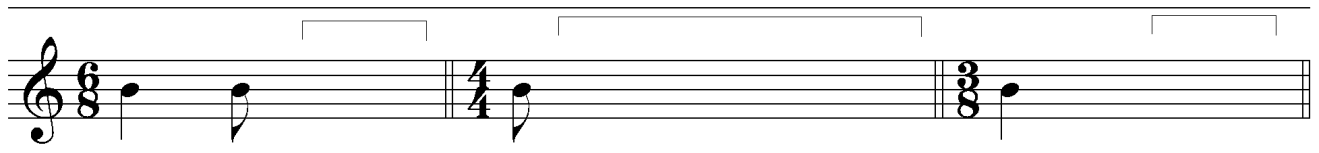
$\frac{9}{8}$  \_\_\_\_\_

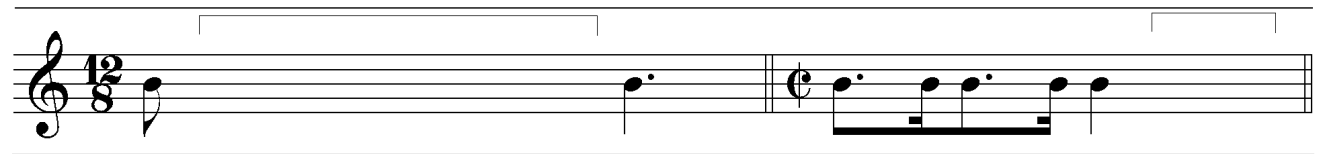
$\frac{6}{8}$  \_\_\_\_\_

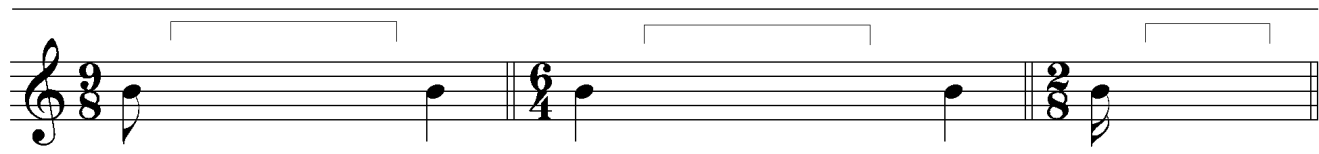
$\frac{2}{8}$  \_\_\_\_\_

$\text{C}$  \_\_\_\_\_

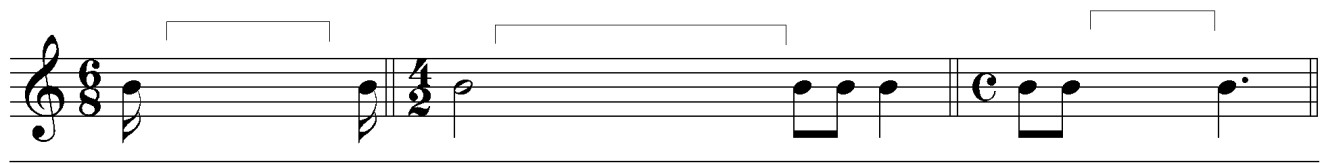
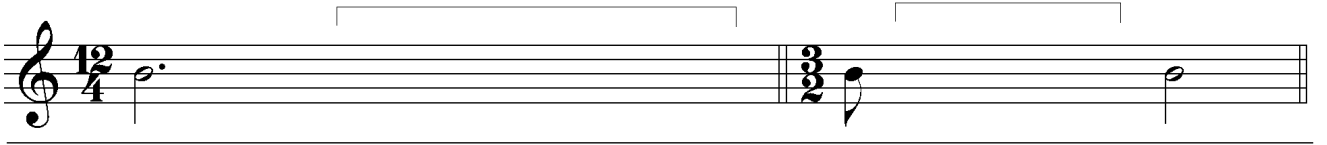
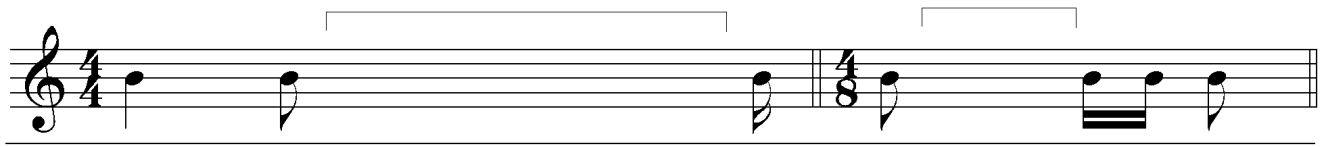
6. Draw the beat above and the breakdown below each excerpt. Then complete each bar with rests:



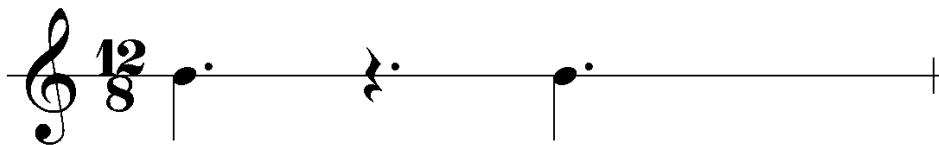
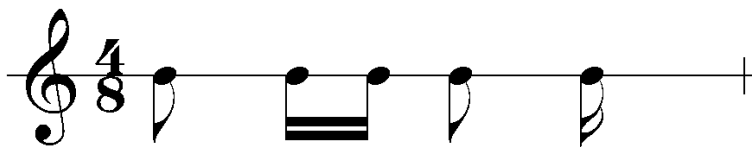
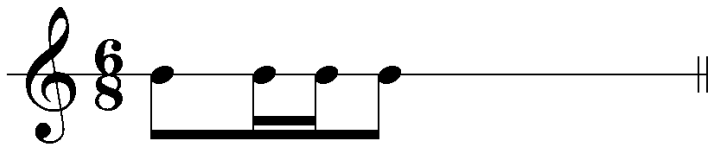
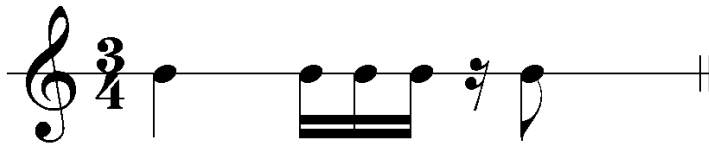
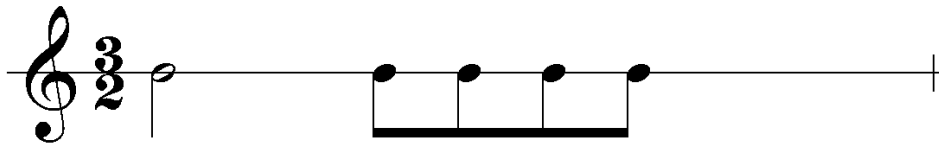
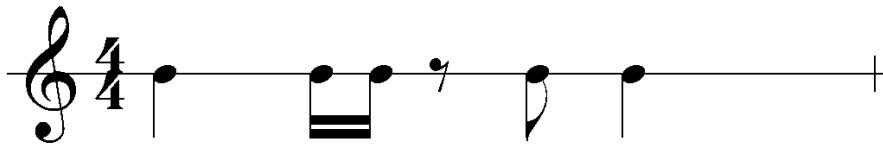




# worksheet



7. Find the note from the answer list that will correctly complete each of the following bars. Draw the note in the bar.



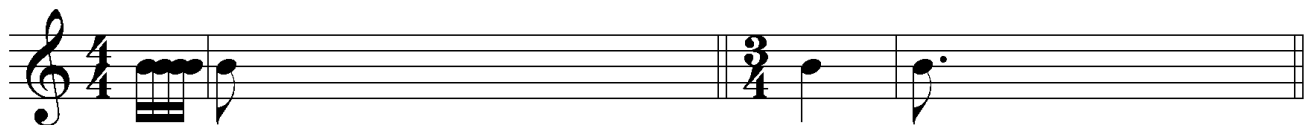
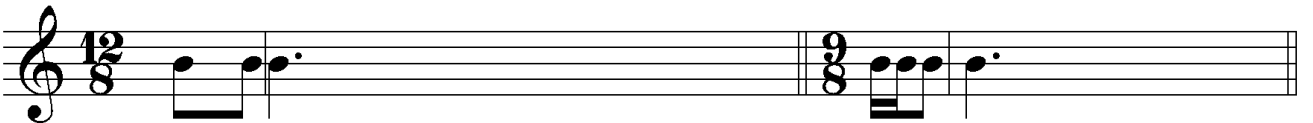
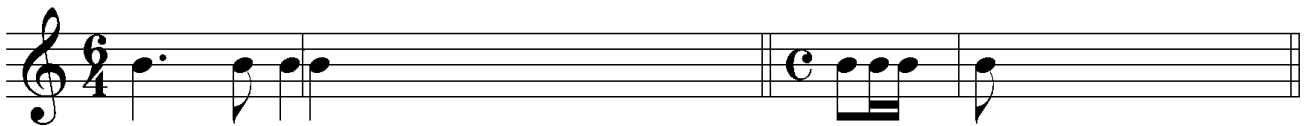
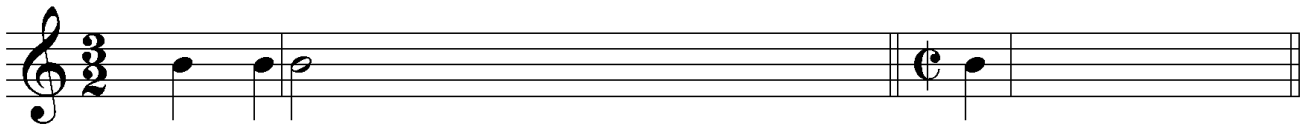
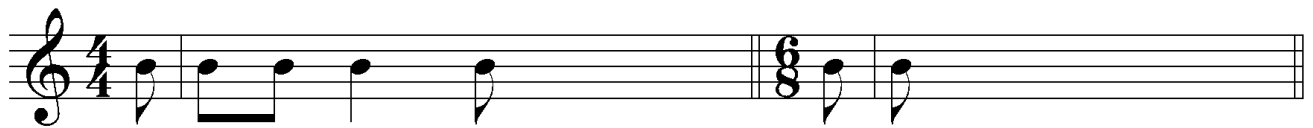
## Answer list



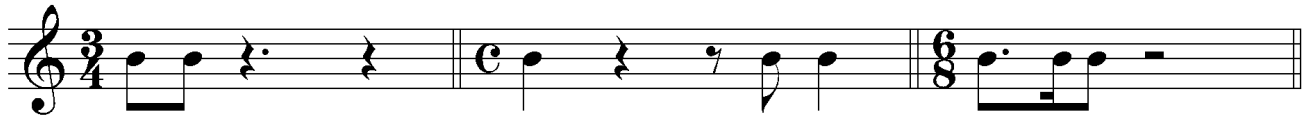
8. All of the following bars of music have rests missing from the beginning. Draw the beat and the breakdown, then fill in the missing rests.

9. Complete the following bars with rests. Be careful! These bars begin with an **anacrusis**.

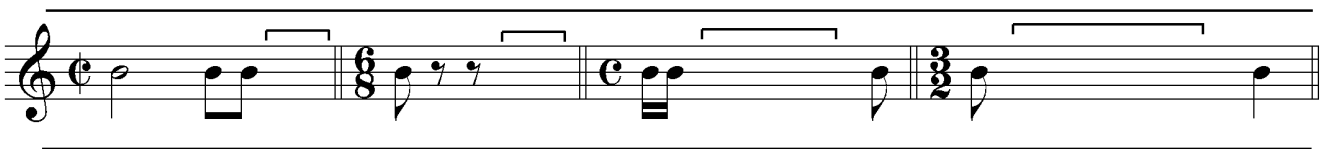
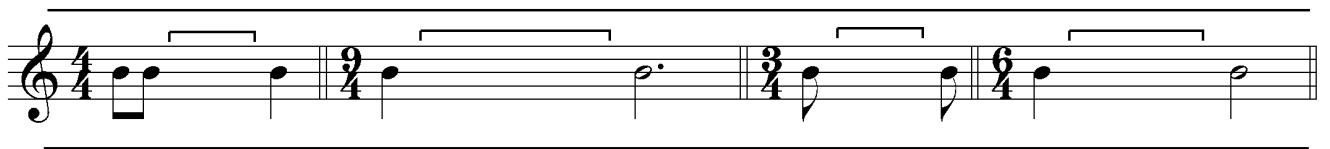
An **anacrusis** is a “pick-up note,” or group of notes, that exists at the very beginning of some pieces of music. An important fact to remember about an anacrusis is that its time value is subtracted from the last bar. In these exercises, assume that the measure before the double bar is the final measure.



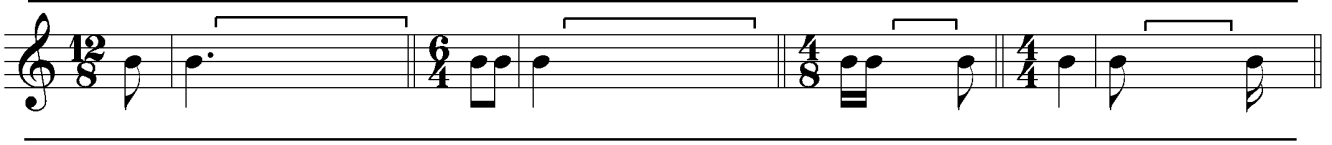
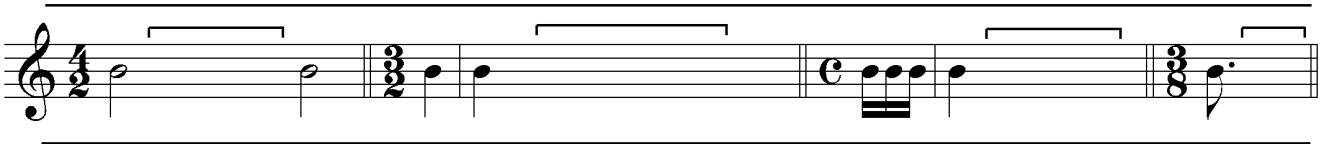
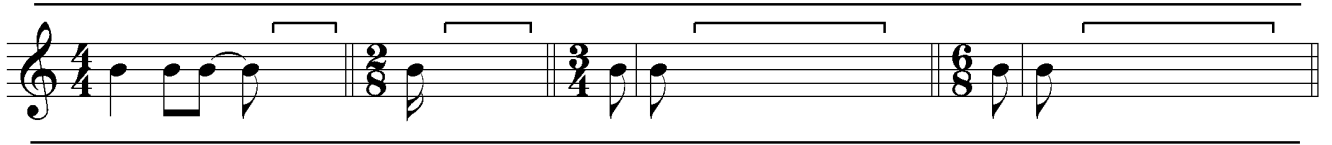
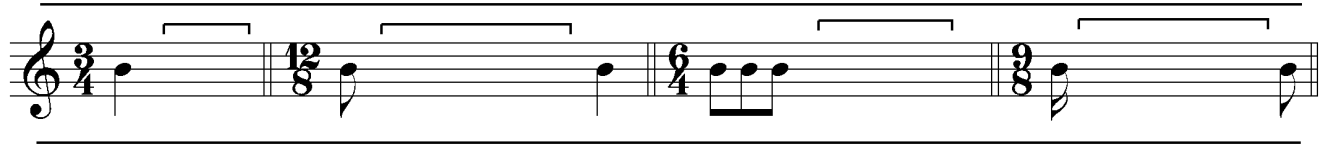
10. Some of the following bars have been completed incorrectly. Study the rests used, and draw an “X” through the wrong bars.



11. Draw the beat above and the breakdown below each excerpt. Then complete the bracketed areas with the appropriate rests. Be careful! Some of these start with an anacrusis.



# worksheet





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# worksheet

## lesson 15: tonic & dominant triads

1. Fill in the blanks. The first one is done for you.

The technical name of the *first* note of a scale is tonic

... the second note? \_\_\_\_\_

... the third note? \_\_\_\_\_

... the fourth note? \_\_\_\_\_

... the fifth note? \_\_\_\_\_

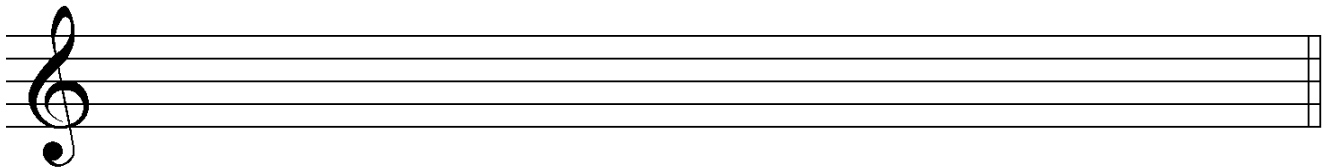
... the sixth note? \_\_\_\_\_

... the seventh note? \_\_\_\_\_



Refer to the  
chart on the  
first page of  
this lesson!

2. Write an F-major scale using whole notes. Use a key signature. Number the notes.



a. The **tonic** note of F-major is \_\_\_\_\_

b. The **dominant** note of F-major is \_\_\_\_\_

3. Fill in the blanks:

a. The tonic note of F-sharp minor is \_\_\_\_\_

b. The dominant note of D major is \_\_\_\_\_

c. The tonic note of C minor is \_\_\_\_\_

d. The dominant note of F minor is \_\_\_\_\_

- e. The tonic note of A-flat major is \_\_\_\_\_
- f. The dominant note of E major is \_\_\_\_\_
- g. The tonic note of A minor is \_\_\_\_\_
- h. The dominant note of A minor is \_\_\_\_\_
- i. The tonic note of G major is \_\_\_\_\_
- j. The dominant note of E-flat major is \_\_\_\_\_

4. Using a key signature, draw the tonic and dominant notes for the following keys.



Watch the clef!

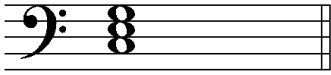
a. <sup>D+</sup> Tonic      Dominant      b. <sup>Bb+</sup> T      D      c. <sup>A-</sup> T      D

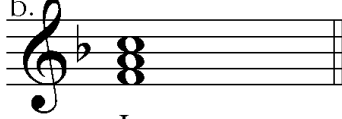
d. <sup>G+</sup> T      D      e. <sup>E-</sup> T      D

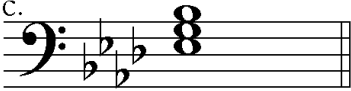
f. <sup>B-</sup> T      D      g. <sup>Ab+</sup> T      D

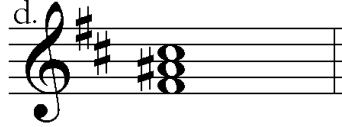
h. <sup>F-</sup> T      D      i. <sup>B+</sup> T      D


5. Here are some triads. We know they're triads because they consist of a root, a 3<sup>rd</sup>, and a 5<sup>th</sup>. Beside each triad, list the notes for each. The first one is done for you.

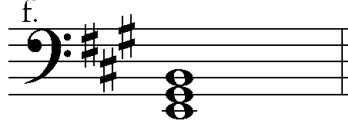
a.  5th: G  
 3rd: E  
 I root: C

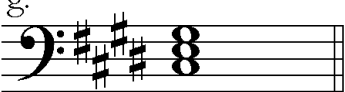
b.  5th: \_\_\_\_\_  
 3rd: \_\_\_\_\_  
 I root: \_\_\_\_\_

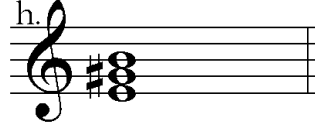
c.  5th: \_\_\_\_\_  
 3rd: \_\_\_\_\_  
 V root: \_\_\_\_\_

d.  5th: \_\_\_\_\_  
 3rd: \_\_\_\_\_  
 V root: \_\_\_\_\_

e.  5th: \_\_\_\_\_  
 3rd: \_\_\_\_\_  
 I root: \_\_\_\_\_

f.  5th: \_\_\_\_\_  
 3rd: \_\_\_\_\_  
 V root: \_\_\_\_\_

g.  5th: \_\_\_\_\_  
 3rd: \_\_\_\_\_  
 i root: \_\_\_\_\_

h.  5th: \_\_\_\_\_  
 3rd: \_\_\_\_\_  
 V root: \_\_\_\_\_

6. Shown below are tonic notes from various scales. Make triads by drawing two notes (the 3<sup>rd</sup> and the 5<sup>th</sup>) above each note. The first one is done for you. Draw an "I" (for major) or an "i" (for minor) underneath each triad. Don't forget a minus sign means minor, and a plus sign means major.



Using naturals is a way of canceling out the previous key signature.

a. G<sup>+</sup> I  
 b. Bb<sup>+</sup>  
 c. A<sup>-</sup>  
 d. Gb<sup>+</sup>  
 e. C<sup>+</sup>  
 f. F<sup>-</sup>  
 g. E<sup>-</sup>  
 h. D<sup>+</sup>  
 i. F<sup>+</sup>  
 j. A<sup>+</sup>  
 k. G<sup>-</sup>  
 l. E<sup>+</sup>  
 m. B<sup>+</sup>  
 n. D<sup>-</sup>  
 o. F#<sup>-</sup>

7. Shown below are dominant notes from various scales. Make triads by drawing two notes (the 3<sup>rd</sup> and the 5<sup>th</sup>) above each note. The first one is done for you. Draw a "V" underneath each triad. Don't forget that dominant triads in the minor key must be major as well.

a. G<sup>+</sup> V  
 b. Bb<sup>+</sup> V  
 c. A<sup>-</sup> V  
 d. Gb<sup>+</sup> V  
 e. C<sup>+</sup> V  
 f. F<sup>-</sup> V  
 g. E<sup>-</sup> V  
 h. D<sup>+</sup> V  
 i. F<sup>+</sup> V  
 j. A<sup>+</sup> V  
 k. G<sup>-</sup> V  
 l. E<sup>+</sup> V  
 m. B<sup>+</sup> V  
 n. D<sup>-</sup> V  
 o. F#<sup>-</sup> V

8. Write the key signature for each example below; write tonic triads and place an "I" under each major triad, and "i" under each minor triad.

E-minor      F#-minor      C-major      A-major      G-major      B-minor

F-minor      D-major      E $\flat$ -major      B-major      G-minor      B $\flat$ -major

9. Write the key signature for each example below, then write dominant triads and place a "V" under each one. Don't forget, dominant triads are always major, even in the minor key.

B-minor      C-major      D-major      A-minor      E $\flat$ -major      F-minor

F#-minor      E-minor      G-major      B-major      G $\flat$ -major      G-minor

10. Identify the following triads as being either tonic (I or i) or dominant (V). Write the answer underneath each triad.

D-minor      G-minor      E-major      F-minor      E-minor

C-major      G-major      E $\flat$ -major      F#-major      C $\flat$ -major

11. Write the requested triads. Use a key signature.

The image shows three rows of musical staves for writing triads. Each staff contains five measures, each with a key signature and a Roman numeral or letter indicating the triad type.

Row 1 (Trebble clef):  
1. D-major, V  
2. E $\flat$ -major, I  
3. F-minor, V  
4. D $\flat$ -major, I  
5. E-minor, V

Row 2 (Bass clef):  
1. A-minor, V  
2. B $\flat$ -major, I  
3. G-minor, V  
4. C-minor, i  
5. C-major, V

Row 3 (Trebble clef):  
1. B-major, V  
2. E-minor, i  
3. B $\flat$ -minor, V  
4. A-major, I  
5. F-minor, i

12. The triads below have errors. Assume that the key and the Roman numerals are correct, and fix the errors by rewriting the triads. (The first one is done for you.)

G-minor	D $\flat$ -major	G-major	B $\flat$ -minor	C-minor
---------	------------------	---------	------------------	---------


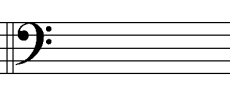
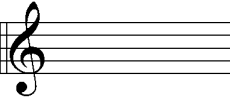
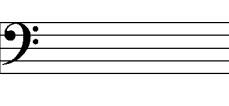
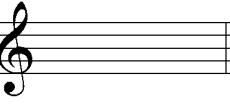
D-minor	E-major	F-major	G $\sharp$ -minor	A-minor
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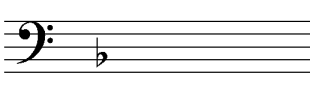
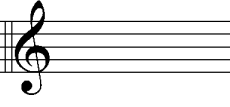
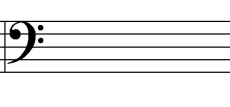
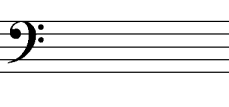
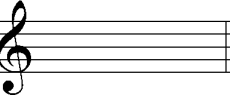
# worksheet

## lesson 16: key identification

1. Write the dominant and tonic chords for each of the following keys. Draw an arrow from the leading tone of the V-chord to the tonic note of the I-chord. Use a key signature. (The first one has been done for you.)

F-major	D-minor	D-major	C-minor	G-major
				
V I	V i	V I	V i	V I

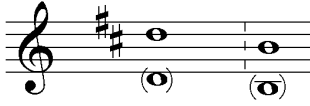



  

B $\flat$ -major	F-minor	B-minor	A-major	G $\sharp$ -minor
				
V I	V i	V I	V i	V I

2. Name the major and minor keys that use each of the following key signatures. Draw the tonic note for both. (The first one has been done for you.)

Major key: _____	+ _____	+ _____	+ _____
Minor key: _____	- _____	- _____	- _____



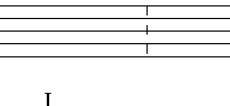
  

			
I i	I i	I i	I i

+ _____	+ _____	+ _____
- _____	- _____	- _____

		
I i	I i	I i

15

I i I i I i I i

3. Each of the following excerpts has been correctly labeled as to key. Draw rectangles around every tonic note. If applicable, draw an arrow from any leading tone that moves to the tonic. (The first one has been done for you.)

a. Eb-major G-major

c. B-minor D-minor

e. A-major f. D-major

g. Bb-minor h. C-major

i. C#-minor j. G-minor

4. Determine the key of each of the following excerpts. Draw rectangles around any tonic notes.



Key: \_\_\_\_\_

Key: \_\_\_\_\_

a.  b. 

Key: \_\_\_\_\_

Key: \_\_\_\_\_

c.  d. 

Key: \_\_\_\_\_

Key: \_\_\_\_\_

e.  f. 

Key: \_\_\_\_\_

Key: \_\_\_\_\_

g.  h. 

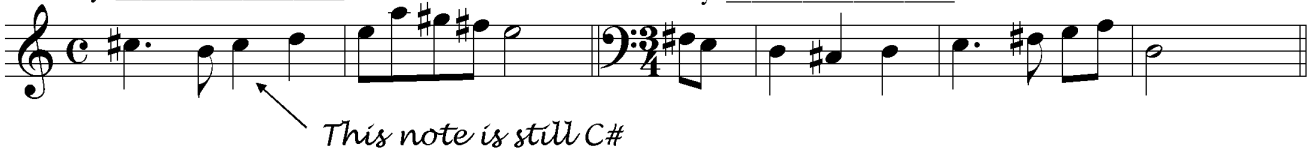
5. In the following excerpts, make a list of all accidentals used. Then determine the key. (The first one is done for you.)

Accidentals used: C#, G#, F#

Accidentals used: \_\_\_\_\_

Key: A+ \_\_\_\_\_

Key: \_\_\_\_\_



Accidentals used: \_\_\_\_\_

Accidentals used: \_\_\_\_\_

Key: \_\_\_\_\_

Key: \_\_\_\_\_

Accidentals used: \_\_\_\_\_

Accidentals used: \_\_\_\_\_

Key: \_\_\_\_\_

Key: \_\_\_\_\_

Accidentals used: \_\_\_\_\_

Key: \_\_\_\_\_

Accidentals used: \_\_\_\_\_

Accidentals used: \_\_\_\_\_

Key: \_\_\_\_\_

Key: \_\_\_\_\_

Accidentals used: \_\_\_\_\_

Accidentals used: \_\_\_\_\_

Key: \_\_\_\_\_

Key: \_\_\_\_\_

Accidentals used: \_\_\_\_\_

Accidentals used: \_\_\_\_\_

Key: \_\_\_\_\_

Key: \_\_\_\_\_

6. For each of the following keys, write the tonic note, the dominant note, and the leading tone. Be sure to raise the leading tone if the key is minor.

Key	Tonic	Dominant	Leading tone
D major	D	A	C#
F minor			
E minor			
A-flat major			
B major			
B minor			
F# minor			
A major			
Bb major			
Ab minor			
G major			

7. On the staff below, write the tonic, dominant, and leading tone of each of the keys listed. Use a key signature at the beginning of each example.

a. E $\flat$ -major

Tonic                      Dominant                      Leading tone

b. D-major

Tonic                      Dominant                      Leading tone

c. E $\flat$ -minor

Tonic                      Dominant                      Leading tone

d. A-minor

Tonic                      Dominant                      Leading tone

# worksheet

e. **G# minor** **f. E-major**

Tonic                  Dominant          Leading tone          Tonic                  Dominant          Leading tone

g. **C-major** **h. C-minor**

Tonic                  Dominant          Leading tone          Tonic                  Dominant          Leading tone

i. **B-major** **j. F#-major**

Tonic                  Dominant          Leading tone          Tonic                  Dominant          Leading tone

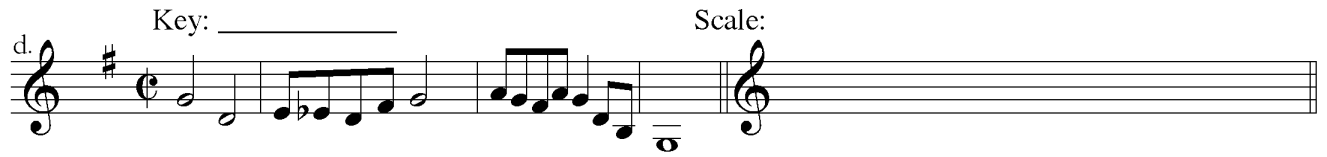
8. Determine the key for each excerpt. Then write the scale for that key, ascending, quarter notes. (If it is minor, write the *melodic* form of the minor, ascending and descending, quarter notes). Use a key signature.

a. Key: \_\_\_\_\_ Scale: \_\_\_\_\_

b. Key: \_\_\_\_\_ Scale: \_\_\_\_\_

c. Key: \_\_\_\_\_ Scale: \_\_\_\_\_

d. Key: \_\_\_\_\_ Scale: \_\_\_\_\_



e. Key: \_\_\_\_\_ Scale: \_\_\_\_\_





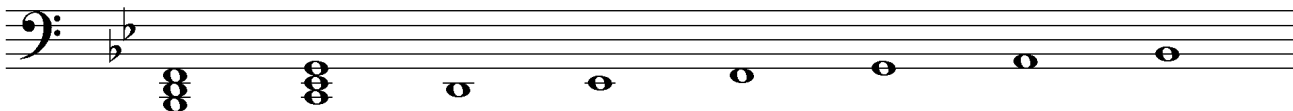
## lesson 17: triads

1. Identify the following as being descriptions of either major, minor, diminished, or augmented triads. (Don't forget "M" means major, "m" means minor.)

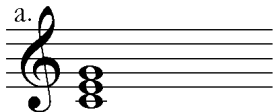
- Outer interval = P5, bottom interval = m3
- Outer interval = d5, bottom interval = m3
- Outer interval = A5, bottom interval = M3
- Outer interval = P5, bottom interval = M3

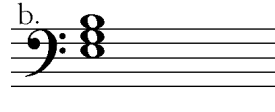
2. Build triads on each note of the following Bb-major scale.

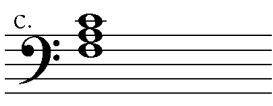
etc...

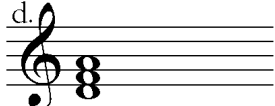


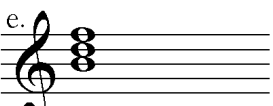
3. Here are some triads, built upon the notes of a C-major scale. Read the descriptions of each triad and label them as being either major, minor, or diminished.

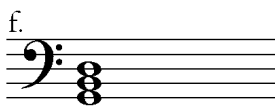
a.  Outer interval: P5  
 bottom interval: +3  
 Triad type: **major**

b.  Outer interval: \_\_\_\_\_  
 bottom interval: \_\_\_\_\_  
 Triad type: \_\_\_\_\_

c.  Outer interval: \_\_\_\_\_  
 bottom interval: \_\_\_\_\_  
 Triad type: \_\_\_\_\_

d.  Outer interval: \_\_\_\_\_  
 bottom interval: \_\_\_\_\_  
 Triad type: \_\_\_\_\_

e.  Outer interval: \_\_\_\_\_  
 bottom interval: \_\_\_\_\_  
 Triad type: \_\_\_\_\_

f.  Outer interval: \_\_\_\_\_  
 bottom interval: \_\_\_\_\_  
 Triad type: \_\_\_\_\_

4. Here are the triads from C-major. Write Roman numerals underneath. Remember to use upper case (capitals) for major and lower case for minor and diminished.

I

5. Write the key signature for F-major (in both clefs), then write the requested triads in *both* staves.

ii                  IV                  I                  vii                  vi                  iii                  V

6. Identify the following triads from D-major by writing the correct Roman numerals underneath.

7. Here are the triads from A-minor. Write Roman numerals underneath.

# worksheet

8. Write the key signature for Db-major, and write the requested triads.

IV                      iii                      vi                      ii                      V

9. Identify the following triads from B-minor by writing the correct Roman numerals underneath.

10. Write the triads as requested. Be careful to notice the key and clef!

E $\flat$ -major                      F $\sharp$ -minor                      C-major                      B $\flat$ -major

ii                      III                      vi                      iii

D-minor                      E-minor                      F-major                      A-major

V                      V                      vii                      iii

C-minor                      F-minor                      B $\flat$ -minor                      G $\flat$ -major

iv                      ii                      vi                      vii

11. Write the Roman numeral for each of the following triads:

- A triad based on the fourth note of a major scale: \_\_\_\_\_
- A triad in Eb-major using these notes: Bb-D-F: \_\_\_\_\_
- A triad in C-minor using these notes: Ab-C-Eb: \_\_\_\_\_
- A triad in G-major using these notes: F#-A-C: \_\_\_\_\_
- A triad in F-minor using these notes: G-Bb-Db: \_\_\_\_\_
- A triad based on the sixth note of a major scale: \_\_\_\_\_
- A triad in B-major using these notes: D#-F#-A#: \_\_\_\_\_
- A triad in A-major using these notes: A-C#-E: \_\_\_\_\_
- A triad based on the second note of a natural minor scale: \_\_\_\_\_
- A triad in Ab-major using these notes: F-Ab-C: \_\_\_\_\_

12.

a. Add a 7<sup>th</sup> above each of the triads below in G-major as shown. Write the proper Roman numerals underneath.

Add a 7th here

I<sup>7</sup>    ii<sup>7</sup>    iii ○    IV ○    V ○    vi ○    vii ○    I ○

b. Add a 7<sup>th</sup> above each of the triads below in E-minor. Identify each triad using Roman numerals:







i    ii    III    iv    V    VI    VII    i


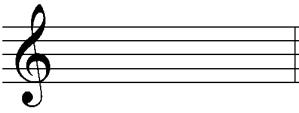
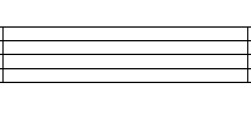
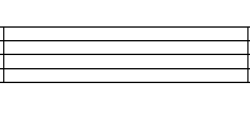
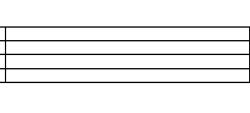
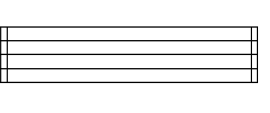
Add '7' to  
Roman numerals

# worksheet

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13. Write the requested triads in each of the following keys. Use a key signature.

C-major	F-major	A-minor	D-minor	F $\sharp$ -major
				
				
ii <sup>7</sup>	iii <sup>7</sup>	V <sup>7</sup>	i <sup>7</sup>	IV <sup>7</sup>

B $\flat$ -major	B-minor	D-major	E-major	F-minor
				
				
V <sup>7</sup>	V <sup>7</sup>	ii <sup>7</sup>	vi <sup>7</sup>	V <sup>7</sup>



# worksheet

## lesson 18: octave transposition

1. Write the note that is one octave higher than the given note. (The first one is done for you). Keep the same clef.

2. Write the note that is one octave lower than the given note. (The first one is done for you). Keep the same clef.

3. Each pair of notes are one octave apart--true or false? Circle either T or F.

T or F      T or F      T or F      T or F      T or F      T or F

T or F      T or F      T or F      T or F      T or F      T or F

# worksheet

4. Write the note that is one octave higher or lower, into a different clef, as requested:

5. Each note in the treble clef below has a partner note in the bass clef that is one octave lower. Write the numbers of the two notes. The first one is done for you:

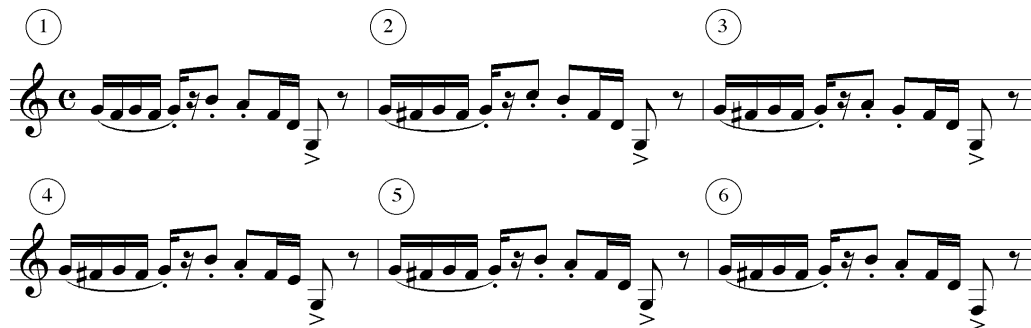
1 - **6**    2 - \_\_\_\_\_    3 - \_\_\_\_\_    4 - \_\_\_\_\_    5 - \_\_\_\_\_    6 - \_\_\_\_\_

7 - \_\_\_\_\_    8 - \_\_\_\_\_    9 - \_\_\_\_\_    10 - \_\_\_\_\_    11 - \_\_\_\_\_    12 - \_\_\_\_\_

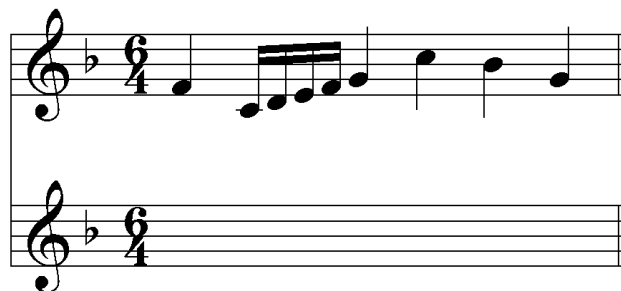
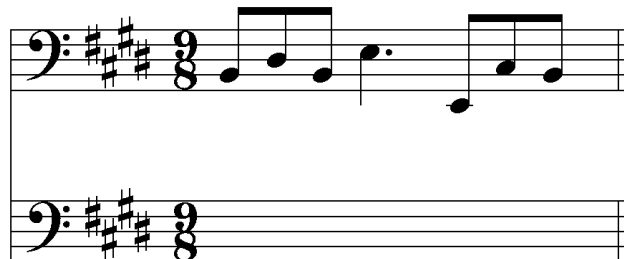
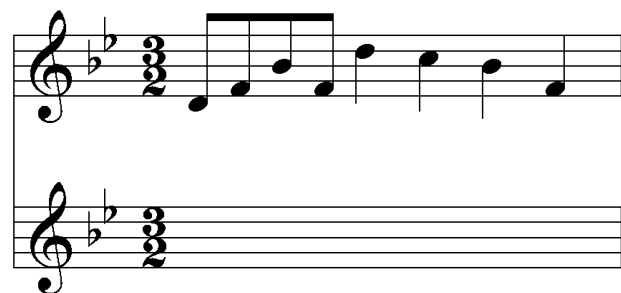
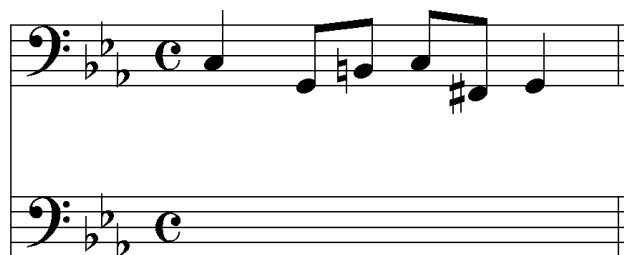
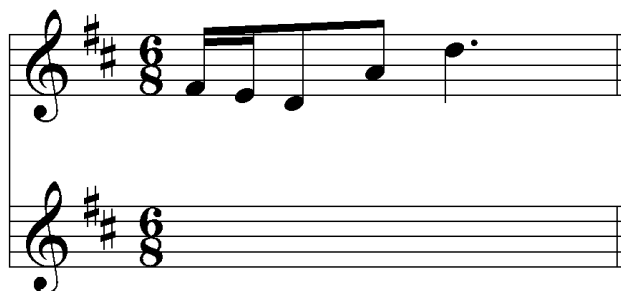
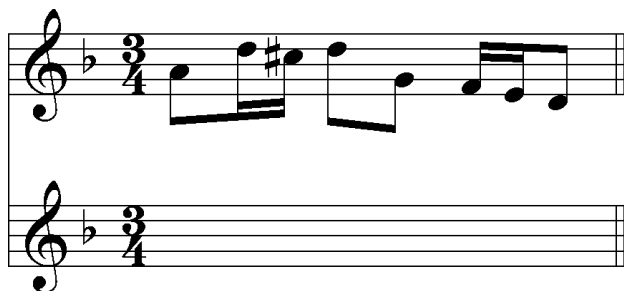
6. Study this bar carefully:



Now find its octave higher “partner” from the six bars below:    **ANSWER:** \_\_\_\_\_



7. Transpose the following short excerpts up one octave, keeping the same clef.



# worksheet

8. Transpose the following short excerpts down one octave, keeping the same clef.

Staff 1: Bass clef, 2/4 time signature. The excerpt consists of four notes: G2, A2, B2, and Bb2. The second staff is empty.

Staff 2: Bass clef, 4/2 time signature, key signature of three sharps (F#, C#, G#). The excerpt consists of six notes: F#3, G#3, A3, B3, C4, and B3. The second staff is empty.

Staff 3: Treble clef, 3/4 time signature, key signature of one sharp (F#). The excerpt consists of six notes: G4, A4, B4, C5, B4, and A4. The second staff is empty.

Staff 4: Bass clef, 12/4 time signature, key signature of five flats (Bb, Eb, Ab, Db, Gb). The excerpt consists of six notes: Bb3, Ab3, Gb3, Fb3, Eb3, and D3. The second staff is empty.

Staff 5: Treble clef, 3/4 time signature, key signature of two flats (Bb, Eb). The excerpt consists of six notes: Bb4, Ab4, Gb4, Fb4, Eb4, and D4. The second staff is empty.

Staff 6: Treble clef, common time signature, key signature of one sharp (F#). The excerpt consists of six notes: G4, A4, B4, C5, B4, and A4. The second staff is empty.

# worksheet

9. Transpose the melodies that are in treble clef *down* one octave into the bass clef. Transpose the bass clef melodies *up* one octave into the treble clef.

Exercise 1: A melody in bass clef, 3/4 time, with notes G2, A2, B2, C3, D3, E3, F3, G3. An empty treble clef staff is provided below for transposition.

Exercise 2: A melody in treble clef, common time, with notes C4, D4, E4, F4, G4, A4, B4, C5. An empty bass clef staff is provided below for transposition.

Exercise 3: A melody in bass clef, 3/8 time, with notes G2, A2, B2, C3, D3, E3, F3, G3. An empty treble clef staff is provided below for transposition.

Exercise 4: A melody in treble clef, common time, with notes C4, D4, E4, F4, G4, A4, B4, C5. An empty bass clef staff is provided below for transposition.

Exercise 5: A melody in bass clef, 3/4 time, with notes G2, A2, B2, C3, D3, E3, F3, G3. An empty treble clef staff is provided below for transposition.

Exercise 6: A melody in treble clef, common time, with notes C4, D4, E4, F4, G4, A4, B4, C5. An empty bass clef staff is provided below for transposition.

# worksheet

10. In each bar below, circle the correct octave pair. Then write the correct letter name under each note. The first one has been done for you.

The image shows musical notation for an octave identification exercise. It consists of two systems of staves. The first system has two staves: the top staff is a treble clef with a circled D# note on the second line, and the bottom staff is a bass clef with notes on the second, third, and fourth lines. The second system has two staves: the top staff is a bass clef with notes on the second, third, and fourth lines, and the bottom staff is a treble clef with notes on the second, third, and fourth lines. The circled D# note in the first system is labeled 'D#' below it. The notes in the first system are labeled E#, G#, D#, and F# below them.

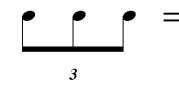
# worksheet

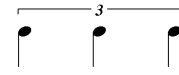
## lesson 19: triplets and other “tuplets”

1. Draw a “3” in the slur of each triplet where indicated, to correct each rhythm.


2. Show the beat and breakdown of each excerpt.

3. Find the note in the answer list that is equal in length to each triplet.


a.  = \_\_\_\_\_

b.  = \_\_\_\_\_

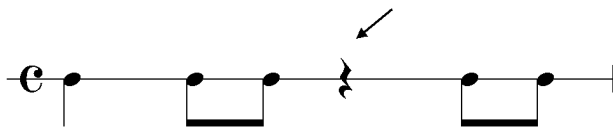
c.  = \_\_\_\_\_

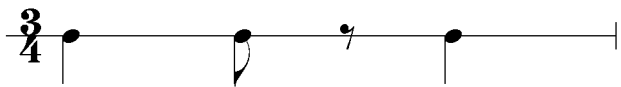
d.  = \_\_\_\_\_

Answer List



4. Rewrite each excerpt, replacing the indicated rest with a triplet of the correct value.

 \_\_\_\_\_

 \_\_\_\_\_

 \_\_\_\_\_

 \_\_\_\_\_

 \_\_\_\_\_

5. Draw in the beat and breakdown.

The first staff shows a sequence of time signatures: 6/8, 9/8, 3/8, and 4/4. The second staff shows 3/8, 6/8, and 9/8. The third staff shows 12/8, 9/8, and 4/4. The fourth staff shows 4/4, 3/8, and 9/8. Each staff contains rhythmic patterns with notes and rests, some with articulation marks like slurs and accents.

6. Complete the following:

a.

A musical staff in 6/8 time with a key signature of one flat. It contains a sequence of notes: a quarter note, an eighth note, a quarter note, and an eighth note. A bracket with the number '2' is placed over the second eighth note, indicating a beamed eighth note.

The “2” means to play two eighth notes where we would normally see \_\_\_\_ eighth notes.

b.

A musical staff in 9/8 time with a key signature of one flat. It contains a sequence of notes: a quarter note, an eighth note, a quarter note, and an eighth note. A bracket with the number '5' is placed over the last eighth note, indicating a beamed sixteenth note.

The “5” means to play five sixteenth notes where we would normally see \_\_\_\_ sixteenth notes.

c.



The “3” means to play three quarter notes where we would normally see \_\_\_\_ quarter notes.

d.



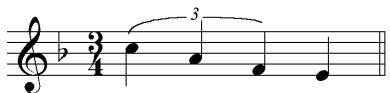
The “2” means to play two eighth notes where we would normally see \_\_\_\_ eighth notes.

e.



The “3” means to play three half notes where we would normally see \_\_\_\_ half notes.

f.



The “3” means to play three quarter notes where we would normally see \_\_\_\_ quarter notes.

g.



The “3” means to play three half notes where we would normally see \_\_\_\_ half notes.

h.



The “5” means to play five sixteenth notes where we would normally see \_\_\_\_ sixteenth notes.

i.



The “3” means to play three half notes where we would normally see \_\_\_\_ half notes.

j.



The “6” means to play six eighth notes where we would normally see \_\_\_\_ eighth notes.

# worksheet

## lesson 20: key transposition


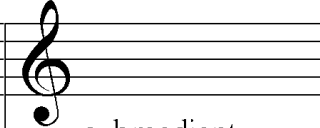
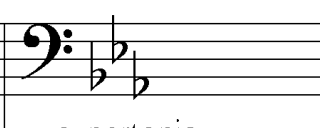

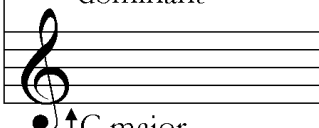
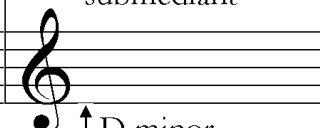
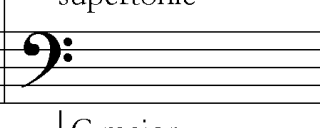
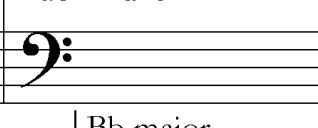
1. Transpose the key (i.e., the key signature) and the given tonic note, into the indicated key. (The first one has been done for you.)

D major	F major	G major	C major	F# major
down to C major	up to Bb major	up to B minor	down to A major	down to D minor

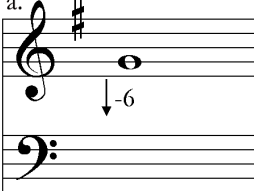
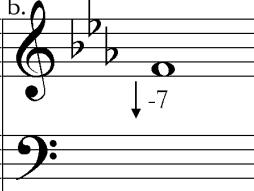
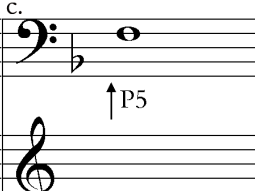

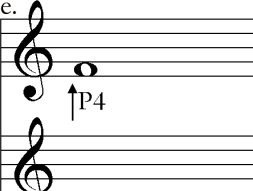
Db major	G major	B major	Gb major
Up to F major	down to Eb major	down to E major	down to D major


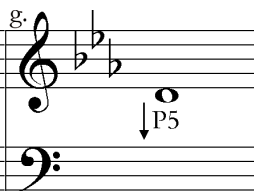
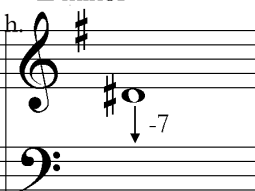
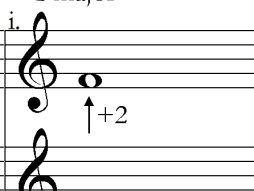

2. For each bar, write the note implied by the technical name. Then transpose it into the requested key. (↓ means to transpose downward.)

A major	A minor	G major	Db major	B minor
subdominant	supertonic	leading tone	mediant	tonic
↓ F major	↓ E minor	↑ B major	↑ E major	↓ F# minor

E major	A minor	Eb major	D major
			
dominant	submediant	supertonic	dominant
			
↑ C major	↑ D minor	↓ C major	↓ Bb major

3. Transpose the following notes into the new key as indicated by the interval. For example, in exercise a, you are asked to transpose the key of G down a minor sixth, and of course transpose the given note G down a minor sixth as well.

a. G major	b. Eb major	c. D minor	d. F major	e. A minor
				

f. B major	g. C minor	h. E minor	i. C major	j. D major
				

4. Transpose each excerpt as indicated. Write the key of the original melody in the space provided.

a.

Key: \_\_\_\_\_

up to B+

b.

Key: \_\_\_\_\_

Down to F+

c.

Key: \_\_\_\_\_

Down to G-

d.

Key: \_\_\_\_\_

up to Db+



i.

Key: \_\_\_\_\_

Musical notation for exercise i. The top staff is in treble clef, key signature of two flats (B-flat and E-flat), and 3/2 time signature. The melody consists of the following notes: G4, A4, B-flat4, C5, D5, E5, F5, G5, F5, E5, D5, C5, B-flat4, A4, G4. The bottom staff is a blank bass clef staff with the instruction "down to A+" written above it.

j.

Key: \_\_\_\_\_

Musical notation for exercise j. The top staff is in treble clef, key signature of two sharps (F-sharp and C-sharp), and common time signature. The melody consists of the following notes: G4, A4, B4, C5, D5, E5, F-sharp5, G5, F-sharp5, E5, D5, C5, B4, A4, G4. The bottom staff is a blank bass clef staff with the instruction "down to F+" written above it.

5. The following melodies are very “chromatic” – they use lots of accidentals, thus blurring the sense of key. Transpose each one as requested.

a.

Musical notation for exercise 5a. The top staff is in bass clef, key signature of one flat (B-flat), and 3/4 time signature. The melody consists of the following notes: G2, A2, B-flat2, C3, D3, E3, F3, G3, F3, E3, D3, C3, B-flat2, A2, G2. The bottom staff is a blank treble clef staff with the instruction "up +6" written above it.

b.



down P5

Musical notation for exercise b: Treble clef, common time signature. The melody consists of a sequence of notes: G4 (sharp), A4 (sharp), B4 (sharp), C5, B4 (natural), A4 (natural), G4 (natural), F4 (natural), E4 (natural), D4 (natural), C4 (natural). The bass staff is empty.

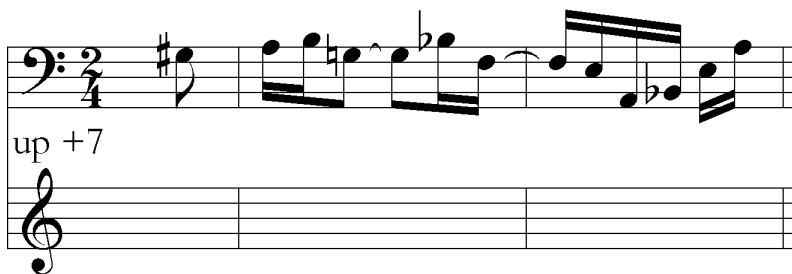
c.



up +2

Musical notation for exercise c: Treble clef, 6/8 time signature. The melody consists of a sequence of notes: G4 (natural), A4 (natural), B4 (natural), C5, B4 (natural), A4 (natural), G4 (natural), F4 (natural), E4 (natural), D4 (natural), C4 (natural). The bass staff is empty.

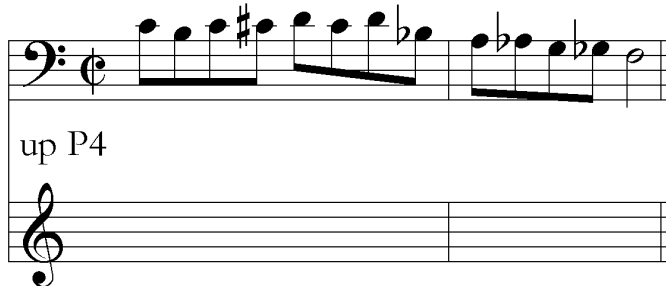
d.



up +7

Musical notation for exercise d: Bass clef, 2/4 time signature. The melody consists of a sequence of notes: G3 (sharp), A3 (sharp), B3 (sharp), C4, B3 (natural), A3 (natural), G3 (natural), F3 (natural), E3 (natural), D3 (natural), C3 (natural). The treble staff is empty.

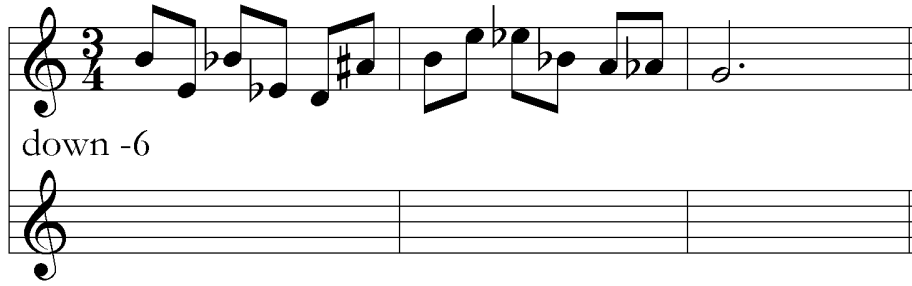
e.



up P4

Musical notation for exercise e: Bass clef, common time signature. The melody consists of a sequence of notes: G3 (sharp), A3 (sharp), B3 (sharp), C4, B3 (natural), A3 (natural), G3 (natural), F3 (natural), E3 (natural), D3 (natural), C3 (natural). The treble staff is empty.

f.



down -6

Musical notation for exercise f: A single treble clef staff in 3/4 time. The melody consists of the following notes: G4 (quarter), A4 (quarter), Bb4 (quarter), C5 (quarter), Bb4 (quarter), A4 (quarter), G4 (quarter), F4 (quarter), E4 (quarter), D4 (quarter), C4 (half). Below the staff, the text "down -6" is written. A second, empty treble clef staff is provided for practice.

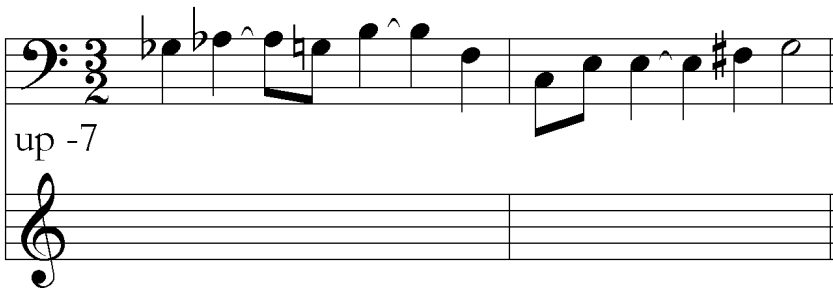
g.



down P5

Musical notation for exercise g: A single treble clef staff in 6/8 time. The melody consists of the following notes: G4 (quarter), A4 (quarter), Bb4 (quarter), C5 (quarter), Bb4 (quarter), A4 (quarter), G4 (quarter), F4 (quarter), E4 (quarter), D4 (quarter), C4 (half). Below the staff, the text "down P5" is written. A second, empty bass clef staff is provided for practice.

h.



up -7

Musical notation for exercise h: A single bass clef staff in 3/2 time. The melody consists of the following notes: Bb3 (quarter), Ab3 (quarter), Gb3 (quarter), Fb3 (quarter), E3 (quarter), D3 (quarter), C3 (quarter), Bb3 (quarter), Ab3 (quarter), Gb3 (quarter), Fb3 (quarter), E3 (quarter), D3 (quarter), C3 (half). Below the staff, the text "up -7" is written. A second, empty treble clef staff is provided for practice.

i.



up +3

Musical notation for exercise i: A single bass clef staff in common time. The melody consists of the following notes: G2 (quarter), A2 (quarter), B2 (quarter), C3 (quarter), D3 (quarter), E3 (quarter), F3 (quarter), G3 (quarter), A3 (quarter), B3 (quarter), C4 (quarter), D4 (quarter), E4 (quarter), F4 (quarter), G4 (quarter), A4 (quarter), B4 (quarter), C5 (quarter), B4 (quarter), A4 (quarter), G4 (quarter), F4 (quarter), E4 (quarter), D4 (quarter), C4 (half). Below the staff, the text "up +3" is written. A second, empty bass clef staff is provided for practice.

j.

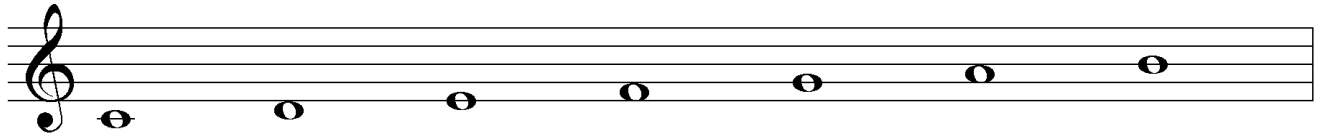
up +2

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# worksheet

## lesson 21: triad inversions

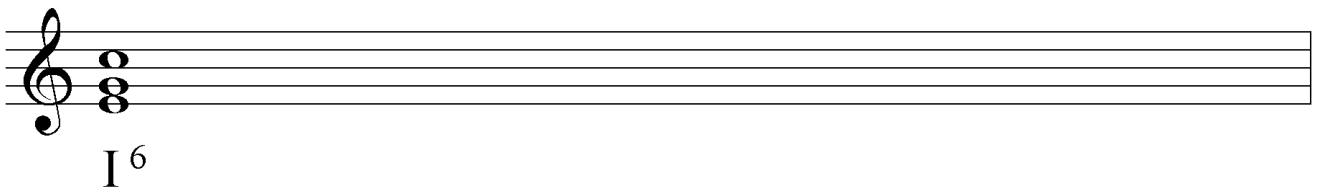
1. Using the C major scale, create root position triads above each scale tone. Then write the Roman numeral under each chord.



2. Fill in the blanks. In C major:

- a. The tones of the I chord are: Root \_\_\_\_\_ 3<sup>rd</sup> \_\_\_\_\_ 5<sup>th</sup> \_\_\_\_\_
- b. The tones of the ii chord are: Root \_\_\_\_\_ 3<sup>rd</sup> \_\_\_\_\_ 5<sup>th</sup> \_\_\_\_\_
- c. The tones of the iii chord are: Root \_\_\_\_\_ 3<sup>rd</sup> \_\_\_\_\_ 5<sup>th</sup> \_\_\_\_\_
- d. The tones of the IV chord are: Root \_\_\_\_\_ 3<sup>rd</sup> \_\_\_\_\_ 5<sup>th</sup> \_\_\_\_\_
- e. The tones of the V chord are: Root \_\_\_\_\_ 3<sup>rd</sup> \_\_\_\_\_ 5<sup>th</sup> \_\_\_\_\_
- f. The tones of the vi chord are: Root \_\_\_\_\_ 3<sup>rd</sup> \_\_\_\_\_ 5<sup>th</sup> \_\_\_\_\_
- g. The tones of the vii chord are: Root \_\_\_\_\_ 3<sup>rd</sup> \_\_\_\_\_ 5<sup>th</sup> \_\_\_\_\_

3. Create first inversion triads in the key of C major, by moving the root up one octave, leaving the third on the bottom. Then write the Roman numeral and inversion under each chord. (The first one is done for you.)



4. Create second inversion triads by moving the root and third up one octave, leaving the fifth on the bottom. Then write the Roman numeral and inversion under each chord. (The first one is done for you.)

5. Fill in the blanks.

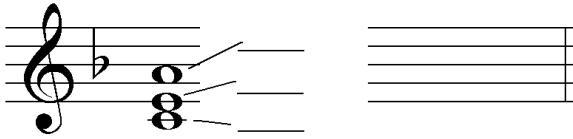
- In a root position triad, the \_\_\_\_\_ (root, 3<sup>rd</sup>, 5<sup>th</sup>) is on the bottom.
- The numbers  $\frac{6}{4}$  after a triad indicate a triad in \_\_\_\_\_ inversion.
- In a first inversion chord, the \_\_\_\_\_ (root, 3<sup>rd</sup>, 5<sup>th</sup>) is on the bottom.
- In a second inversion chord, the \_\_\_\_\_ (root, third, fifth) is on the bottom.
- The number “6” after a triad signifies a triad in \_\_\_\_\_ inversion.
- A triad with the fifth of the chord on the bottom is in \_\_\_\_\_ inversion.
- A triad with the root on the bottom is in \_\_\_\_\_ position.

6. These triads are all in first inversion (i.e. they have the third of the chord on the bottom). For each triad, write the note names. Then rewrite each triad, in root position. (The first one is done for you.)

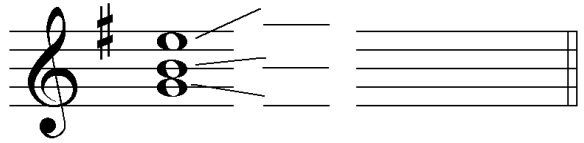
a.

b.

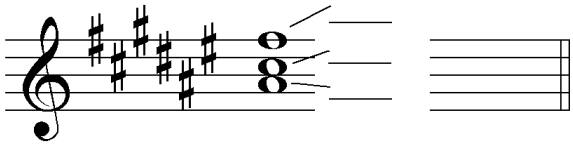
c.



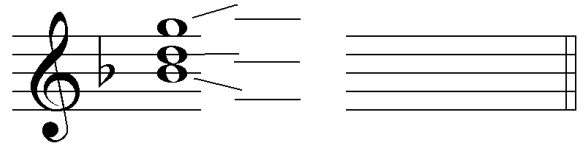
d.



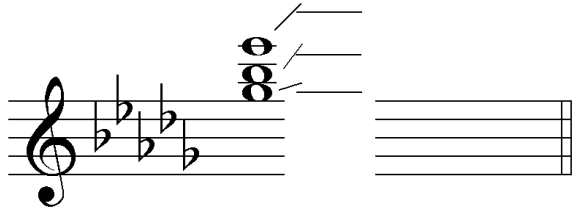
e.



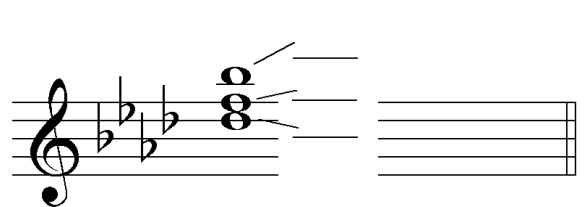
f.



g.

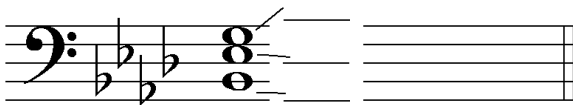


h.

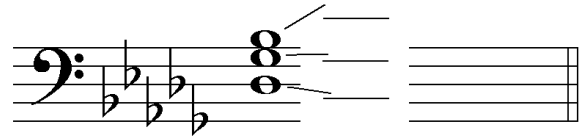


7. These triads are all in second inversion (i.e., they have the fifth of the chord on the bottom). For each triad, write the note names. Then rewrite each triad in root position.

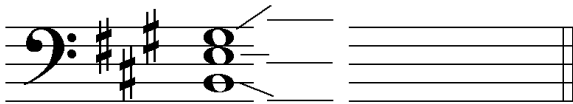
a.



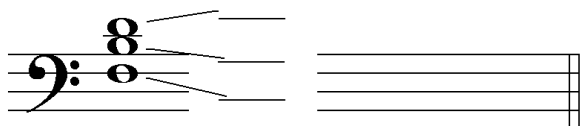
b.



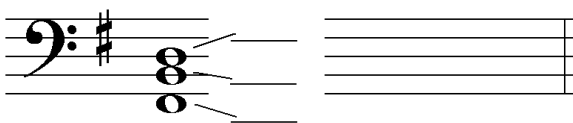
c.



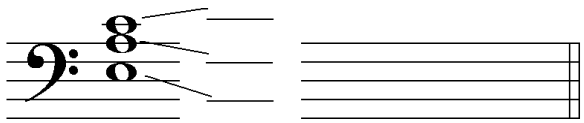
d.



e.



f.



g.

h.

8. Analyze each of the following triads (in major keys) and write the correct Roman numeral analysis underneath each triad.

a. b. c. d.

e. f. g. h.

9. These triads (in major keys) are in open spacing. Write the note names. Analyze each triad. (The first has been done for you.)

a. E  
C  
G  
I<sub>4</sub><sup>6</sup>

b.

c.

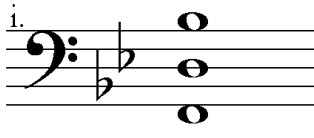
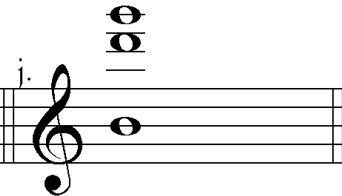
d.

e.

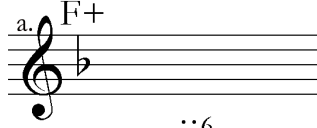
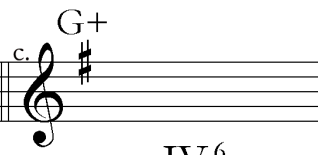
f.


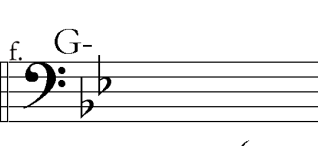
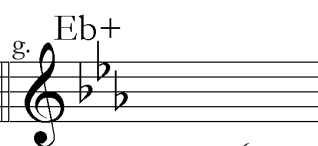

g.

h.

i.  || j. 

10. Write triads according to the given key and Roman numeral analysis.

a.   $F^+$   $ii^6$  || b.   $B^-$   $i_4^6$  || c.   $G^+$   $IV^6$  || d.   $C^-$   $III^6$

e.   $E^+$   $vi_4^6$  || f.   $G^-$   $V^6$  || g.   $Eb^+$   $IV_4^6$  || h.   $F^-$   $ii_4^6$

i.   $C\#^+$   $vii^6$  || j.   $G^-$   $iv^6$



---

# worksheet

## lesson 22: cadences

1. Fill in the blanks.

- A perfect authentic cadence uses this chord progression: \_\_\_\_\_ to \_\_\_\_\_.
- A cadence that features the chords IV - I is called a \_\_\_\_\_ cadence.
- A V-I cadence, where the top voice does *not* end on the tonic, is called a(n) \_\_\_\_\_ cadence.
- A half cadence uses this chord progression: \_\_\_\_\_ to \_\_\_\_\_.
- This cadence is sometimes called the "Amen" cadence: \_\_\_\_\_.

2. Here are some perfect authentic cadences (V – I) in various major and minor keys. The bass notes are missing. Write the missing bass notes in the bass staff.

Four examples of perfect authentic cadences (V – I) in major keys. Each example consists of a treble staff and a bass staff. The treble staff shows the V and I chords. The bass staff shows the V chord and the I chord with a missing bass note. The keys are: 1. D major (V: F#4, A4, C#5; I: D4, F#4, A4), 2. E major (V: G#4, B4, D#5; I: E4, G#4, B4), 3. F# major (V: A#4, C#5, E5; I: F#4, A#4, C#5), 4. G# major (V: B#4, D#5, F#5; I: G#4, B#4, D#5).

Four examples of perfect authentic cadences (V – i) in minor keys. Each example consists of a treble staff and a bass staff. The treble staff shows the V and i chords. The bass staff shows the V chord and the i chord with a missing bass note. The keys are: 1. D minor (V: F#4, A4, C#5; i: D4, F#4, A4), 2. E minor (V: G#4, B4, D#5; i: E4, G#4, B4), 3. F# minor (V: A#4, C#5, E5; i: F#4, A#4, C#5), 4. G# minor (V: B#4, D#5, F#5; i: G#4, B#4, D#5).

# worksheet

3. Here are some half cadences (I – V) in various keys. The bass notes are missing. Write the missing bass notes in the bass staff.

I V i V I V I V

I V i V I V i V

4. The following cadences are either perfect authentic (PAC) or imperfect authentic (IAC). Label each cadence.

\_\_\_\_\_

\_\_\_\_\_

5. Here are some plagal cadences (IV – I) in various major and minor keys. The bass notes are missing. Write the missing bass notes in the bass staff.

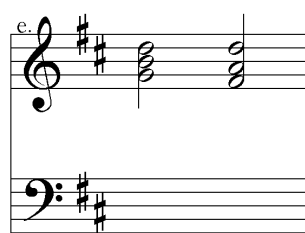
a. 


b. 

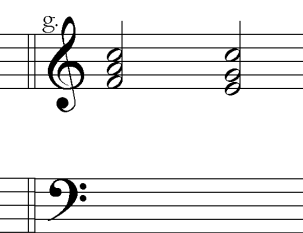
c. 


d. 

IV I iv i iv i IV I

e. 

f. 

g. 

h. 

IV I IV I IV I IV I

6. The following cadences are either half cadences or plagal cadences. Label each cadence as “half” or “plagal.”

a. 

b. 

c. 

d. 

\_\_\_\_\_

e.  $D^+$       f.  $A^-$       g.  $F^+$       h.  $F^-$

7. Create perfect authentic cadences by drawing the notes in the treble clef staff.

a.  $E_b^+$       b.  $B_b^-$       c.  $F^\#^+$       d.  $D^-$

e.  $E^+$       f.  $A^-$       g.  $A_b^+$       h.  $C^-$

8. Analyze the following cadences, placing PAC, IAC, PC, or HC under each one.

a.  $G^+$       b.  $D^-$       c.  $B_b^+$       d.  $F^\#^+$

e.  $A\flat+$       f.  $C-$       g.  $C+$       h.  $E+$

\_\_\_\_\_

i.  $F-$       j.  $A+$       k.  $G-$       l.  $D+$

\_\_\_\_\_

9. Create half cadences (I – V) by drawing three notes in the treble clef.

a.  $E-$       b.  $F+$       c.  $G-$       d.  $A+$

e.  $F-$       f.  $E\flat+$       g.  $A-$       h.  $D+$

10. Create plagal cadences (IV – I) by drawing three notes in the treble clef.

a. E<sup>-</sup>      b. F<sup>+</sup>      c. G<sup>-</sup>      d. A<sup>+</sup>

e. F<sup>-</sup>      f. E<sup>b+</sup>      g. A<sup>-</sup>      h. D<sup>+</sup>

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# worksheet

## lesson 23: modes

1. Name the mode that is created by starting a scale on each note of the major scale:

- a. From tonic to tonic: \_\_\_\_\_ .
- b. From supertonic to supertonic: \_\_\_\_\_ .
- c. From mediant to mediant: \_\_\_\_\_ .
- d. From subdominant to subdominant: \_\_\_\_\_ .
- e. From dominant to dominant: \_\_\_\_\_ .
- f. From submediant to submediant: \_\_\_\_\_ .
- g. From leading tone to leading tone: \_\_\_\_\_ .

2. In C major, write scales in each of the following modes. The starting notes have been given.

a. Ionian



A musical staff in treble clef with a C-clef. The first line contains a whole note C4. The rest of the staff is empty.

b. Locrian



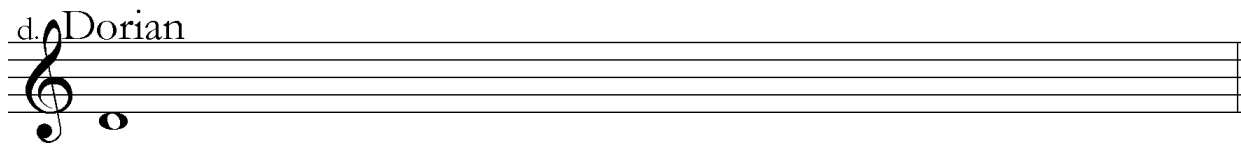
A musical staff in treble clef with a C-clef. The first line contains a whole note C4. The rest of the staff is empty.

c. Lydian

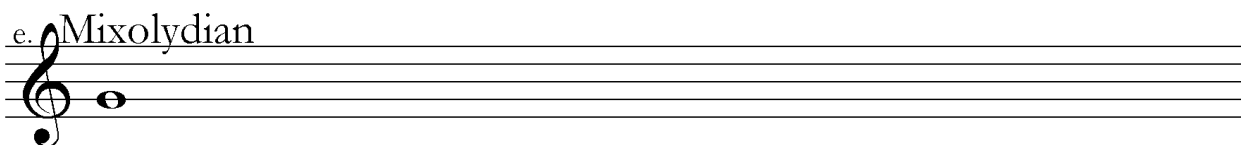


A musical staff in treble clef with a C-clef. The first line contains a whole note C4. The rest of the staff is empty.

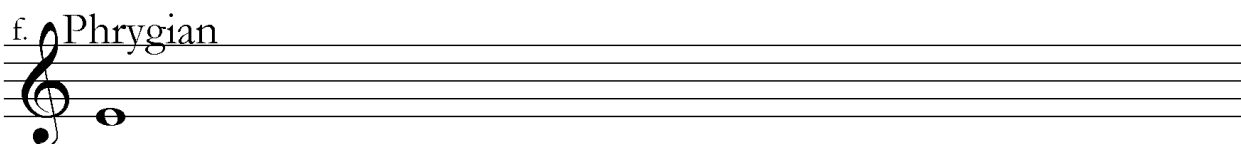
d. Dorian

A musical staff in treble clef with a key signature of one flat (Bb). The scale starts on D4 (the second line) and consists of the notes D, E, F, G, A, Bb, C, D. The notes are written as half notes.

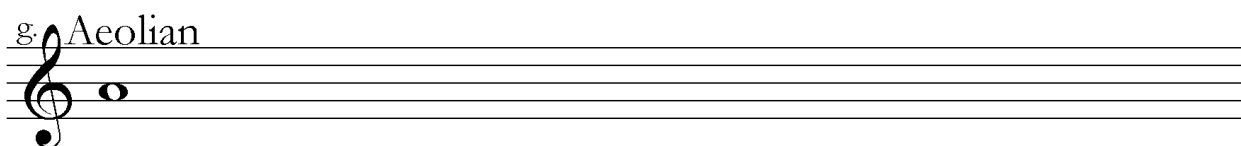
e. Mixolydian

A musical staff in treble clef with a key signature of one flat (Bb). The scale starts on E4 (the second space) and consists of the notes E, F, G, A, Bb, C, Bb, E. The notes are written as half notes.

f. Phrygian


A musical staff in treble clef with a key signature of one flat (Bb). The scale starts on F4 (the first space) and consists of the notes F, Gb, A, B, C, D, E, F. The notes are written as half notes.

g. Aeolian

A musical staff in treble clef with a key signature of one flat (Bb). The scale starts on G4 (the second space) and consists of the notes G, Ab, Bb, C, D, Eb, F, G. The notes are written as half notes.

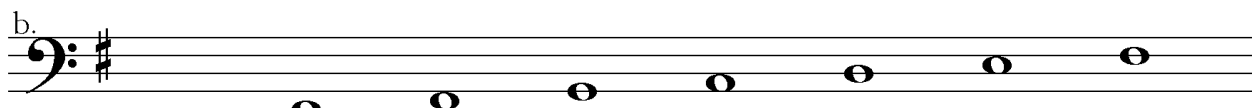
3. Here are various modal scales based upon different major scales. Identify each modal scale. (The first one is done for you.)

a.

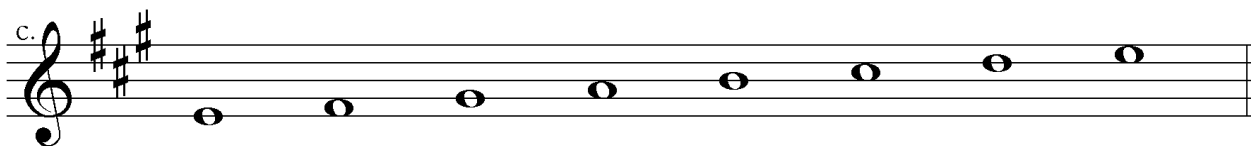
A musical staff in treble clef with a key signature of two flats (Bb, Eb). The scale starts on F4 (the first space) and consists of the notes F, G, Ab, Bb, C, D, Eb, F. The notes are written as half notes.

Modal scale: F Dorian

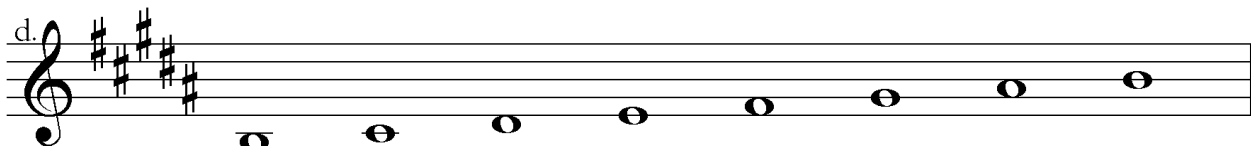
b.

A musical staff in bass clef with a key signature of one sharp (F#). The scale starts on C3 (the first line) and consists of the notes C, D, E, F#, G, A, B, C. The notes are written as half notes.

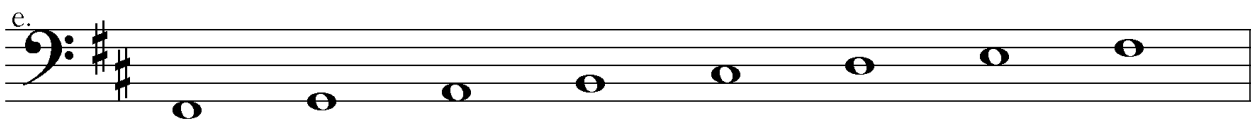
Modal scale: \_\_\_\_\_

c. 

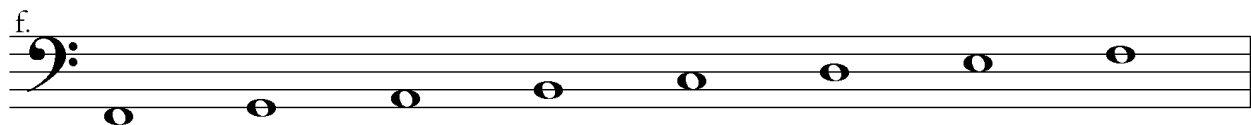
Modal scale: \_\_\_\_\_

d. 

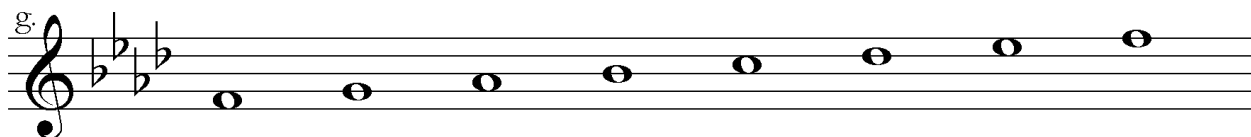
Modal scale: \_\_\_\_\_

e. 

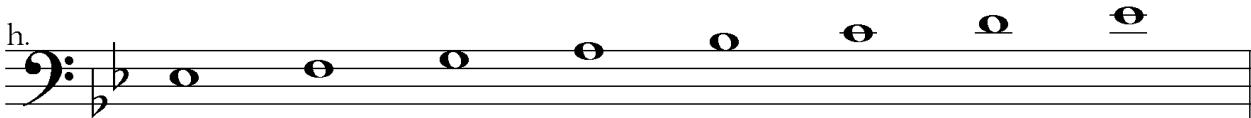
Modal scale: \_\_\_\_\_

f. 

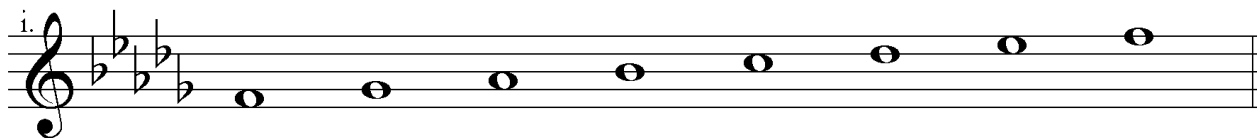
Modal scale: \_\_\_\_\_

g. 

Modal scale: \_\_\_\_\_

h. 

Modal scale: \_\_\_\_\_



Modal scale: \_\_\_\_\_

4. Write the requested modal scales, based upon the major key signatures shown.

a. Lydian

b. Phrygian

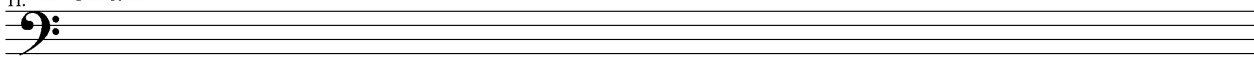
c. Mixolydian

d. Aeolian

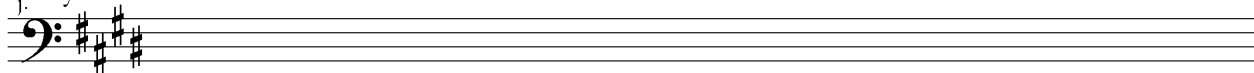
e. Ionian

g. Locrian

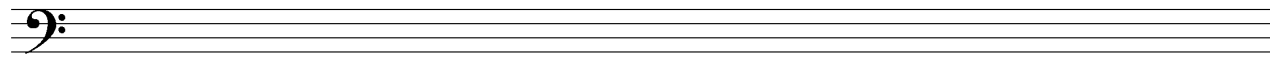
h. Dorian



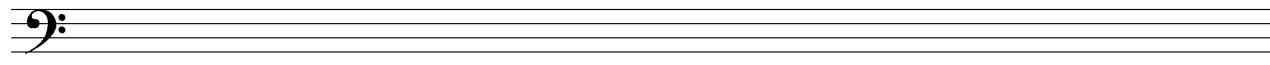
i. Lydian



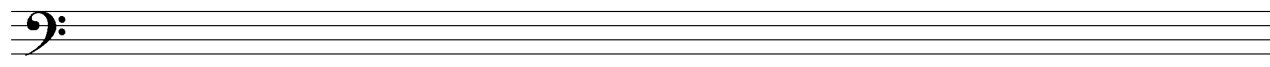
5. Draw the key signature of E major at the beginning of each line. Then write all of the modal scales, one per line. (Remember the mode names are: Ionian, Dorian, Phrygian, Lydian, Mixolydian, Aeolian, and Locrian.)



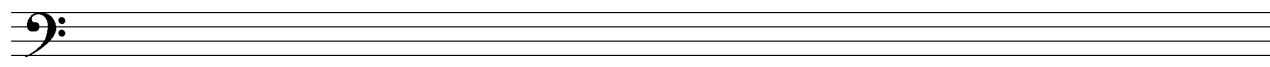
Mode: \_\_\_\_\_



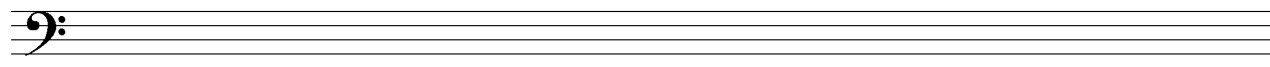
Mode: \_\_\_\_\_



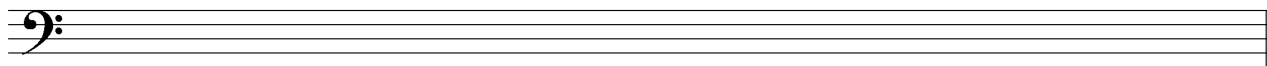
Mode: \_\_\_\_\_



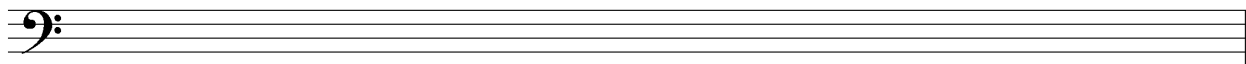
Mode: \_\_\_\_\_



Mode: \_\_\_\_\_



Mode: \_\_\_\_\_




Mode: \_\_\_\_\_

6. Fill in the blanks:

a. In two flats, the phrygian scale begins on the note \_\_\_\_\_.

b. In three sharps, the dorian scale begins on the note \_\_\_\_\_.

c. The scale of F mixolydian uses the following key signature: 

d. In four flats, the aeolian scale begins on the note \_\_\_\_\_.

e. The scale of D locrian uses the following key signature: 

f. In one sharp, the Lydian scale begins on the note \_\_\_\_\_.

g. In five flats, the ionian scale begins on the note \_\_\_\_\_.

h. The scale of G phrygian uses the following key signature: 

i. The scale of B dorian uses the following key signature: 

j. In six flats, the lydian scale begins on the note \_\_\_\_\_.

7. Here are some modal melodies. By considering the key signature and the note around which the melody is centered, identify the mode.

a. Mode: \_\_\_\_\_



b. Mode: \_\_\_\_\_



c. Mode: \_\_\_\_\_



d. Mode: \_\_\_\_\_



e. Mode: \_\_\_\_\_



f. Mode: \_\_\_\_\_

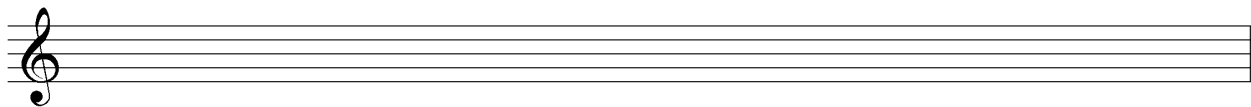


g. Mode: \_\_\_\_\_

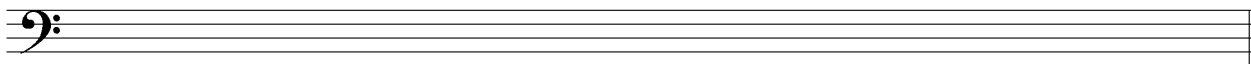




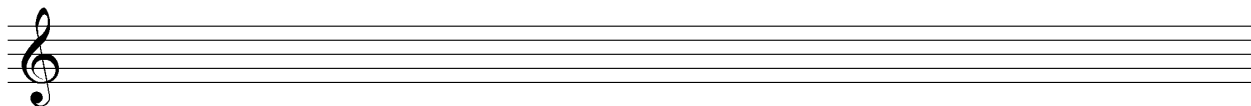
g. Eb mixolydian



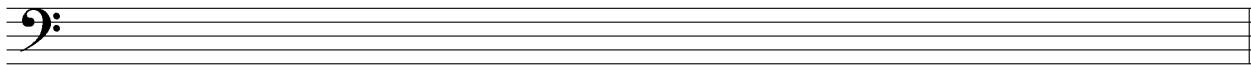
h. Bb aeolian:



i. D lydian:



j. E ionian:



9. Who am I? Identify the modes as described:

- a. My first note is F# and my key signature is two sharps: \_\_\_\_\_
- b. My first note is G and my key signature is four flats: \_\_\_\_\_
- c. My first note is C and my key signature is two flats: \_\_\_\_\_
- d. My first note is A and my key signature is two sharps: \_\_\_\_\_
- e. My first note is F and my key signature is three flats: \_\_\_\_\_
- f. My first note is D and my key signature is one flat: \_\_\_\_\_
- g. My first note is A and my key signature is three sharps: \_\_\_\_\_
- h. My first note is G and my key signature is two flats: \_\_\_\_\_

# worksheet

i. My first note is C# and my key signature is five sharps: \_\_\_\_\_

j. My first note is C# and my key signature is six sharps: \_\_\_\_\_

10. Identify the mode of each melody.

Mode: \_\_\_\_\_



Mode: \_\_\_\_\_

Mode: \_\_\_\_\_



Mode: \_\_\_\_\_



Mode: \_\_\_\_\_

Mode: \_\_\_\_\_



Mode: \_\_\_\_\_

Mode: \_\_\_\_\_



Mode: \_\_\_\_\_

Mode: \_\_\_\_\_

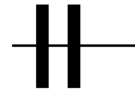


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# worksheet

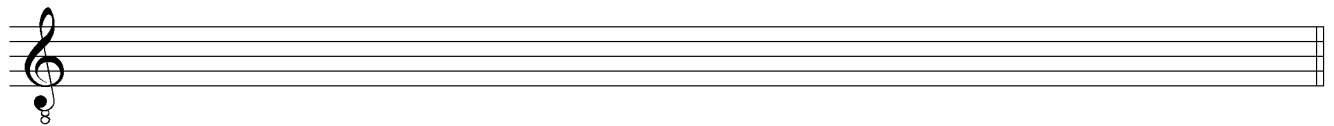
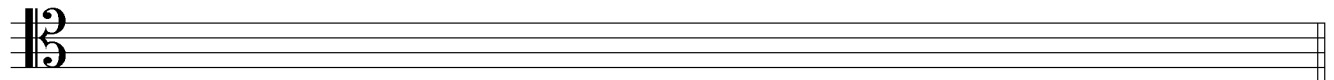
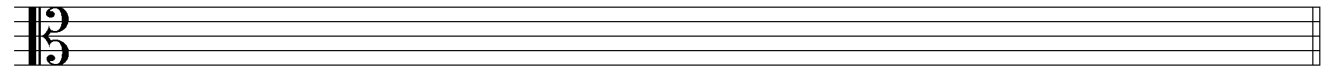
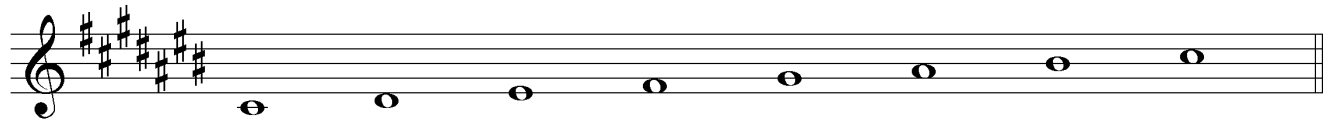
## lesson 24: other clefs

1. Name the following clefs.

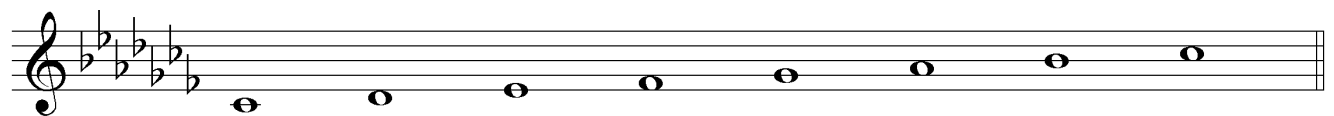


\_\_\_\_\_

2. Rewrite the C# major scale into the following clefs using the same pitches. Use a key signature.

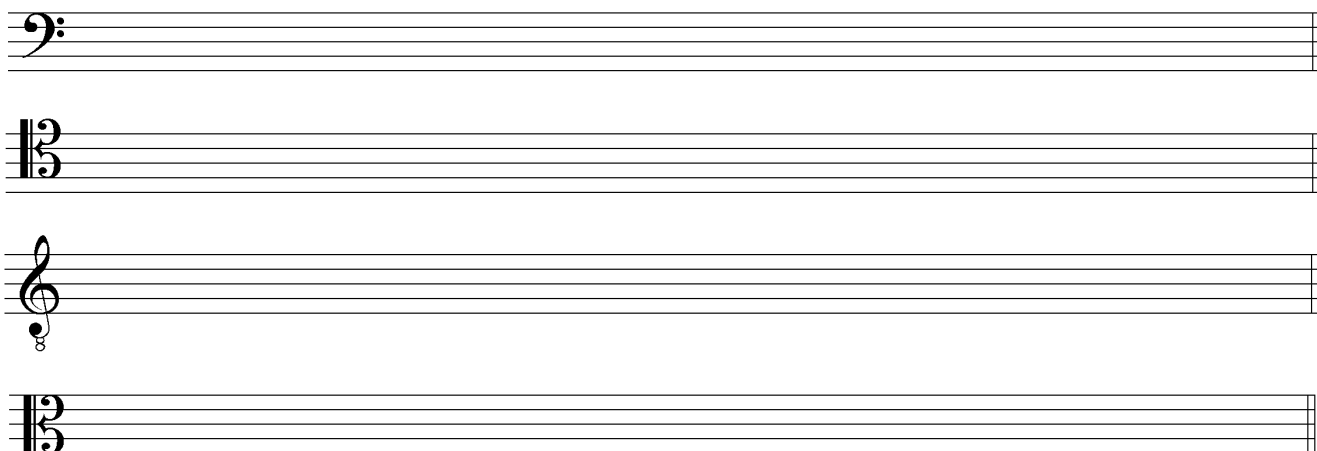


3. Rewrite the Cb major scale into the following clefs. Use a key signature. You may choose an octave transposition to reduce leger lines if you wish.



# worksheet

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4. In the following melodies, write the note names under each note.

a.



b.



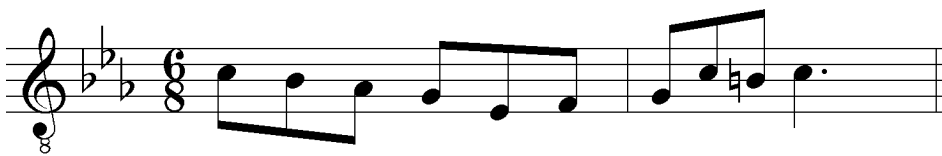
c.



d.



e.



f.



g.



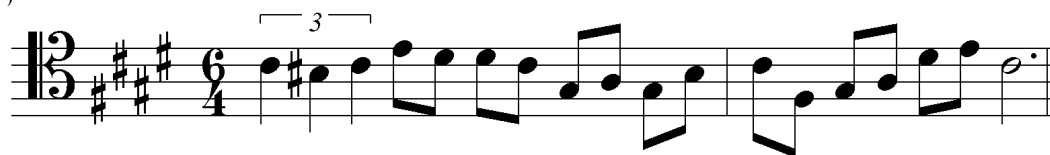
h.



i.



j.



# worksheet

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5. Write the requested scales as indicated, in quarter notes, using a key signature.

a. C melodic minor, vocal tenor clef, ascending and descending:

A musical staff consisting of five horizontal lines, intended for writing the C melodic minor scale in vocal tenor clef.

b. G major, alto clef, descending:

A musical staff consisting of five horizontal lines, intended for writing the G major scale in alto clef.

c. Db major, tenor (C) clef, ascending:

A musical staff consisting of five horizontal lines, intended for writing the Db major scale in tenor (C) clef.

d. B harmonic minor, alto clef, descending:

A musical staff consisting of five horizontal lines, intended for writing the B harmonic minor scale in alto clef.

e. C dorian, vocal tenor clef, descending:

A musical staff consisting of five horizontal lines, intended for writing the C dorian scale in vocal tenor clef.

f. E mixolydian, tenor (C) clef:

A musical staff consisting of five horizontal lines, intended for writing the E mixolydian scale in tenor (C) clef.

g. A melodic minor, alto clef, ascending and descending:

A musical staff consisting of five horizontal lines, intended for writing the A melodic minor scale in alto clef.

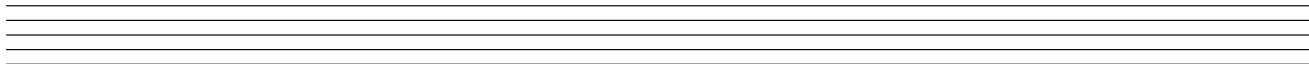
h. Eb major, tenor (C) clef, ascending:

A musical staff consisting of five horizontal lines, intended for writing the Eb major scale in tenor (C) clef.

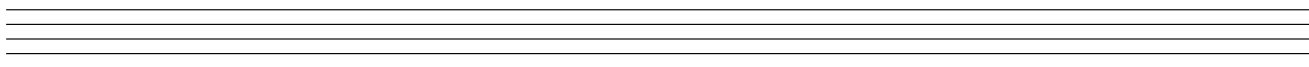
# worksheet

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i. F aeolian, alto clef, descending:

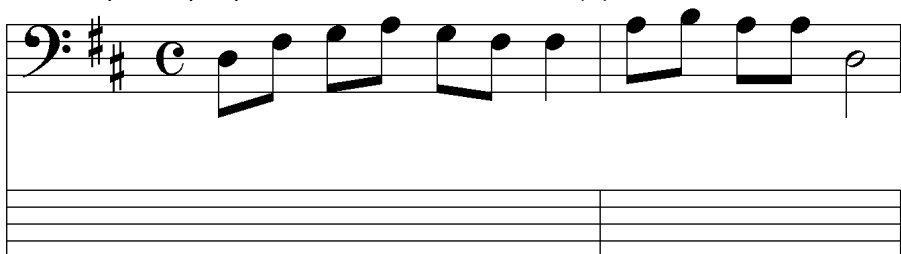
An empty musical staff consisting of five horizontal lines, intended for writing a descending scale in F aeolian mode using an alto clef.

j. F# harmonic minor, vocal tenor clef, ascending:

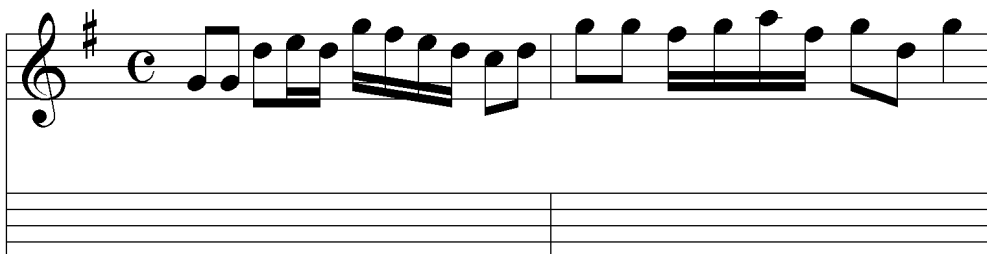
An empty musical staff consisting of five horizontal lines, intended for writing an ascending scale in F# harmonic minor mode using a vocal tenor clef.

6. Transpose the following melodies as requested.

a. Transpose up a perfect fifth, into the tenor (C) clef:

Musical notation for exercise 6a. The first staff is a bass clef with a key signature of one sharp (F#) and a common time signature (C). The melody consists of the following notes: G2, A2, B2, C3, D3, E3, F#3, G3, A3, B3, C4. Below the first staff are two empty musical staves for the student to write the transposed melody.

b. Transpose down a perfect fourth, into the alto clef:

Musical notation for exercise 6b. The first staff is a treble clef with a key signature of one sharp (F#) and a common time signature (C). The melody consists of the following notes: G4, A4, B4, C5, D5, E5, F#5, G5, A5, B5, C6. Below the first staff are two empty musical staves for the student to write the transposed melody.

c. Do not transpose; transcribe into vocal tenor clef:

Musical notation for exercise c: A single staff in bass clef with a 6/8 time signature. The melody starts on a dotted quarter note, followed by eighth notes, and ends with a double bar line. Below the staff are two empty staves for transcription.

d. Transpose up an octave, into the treble clef:

Musical notation for exercise d: A single staff in bass clef with a 3/4 time signature. The melody consists of eighth notes and quarter notes. Below the staff are two empty staves for transcription.

e. Transpose down a major second, into the vocal tenor clef:

Musical notation for exercise e: A single staff in treble clef with a 6/4 time signature. The melody consists of quarter notes and eighth notes. Below the staff are two empty staves for transcription.

f. Transpose down a major third, into the bass clef:

Musical notation for exercise f: A single staff in treble clef with a common time signature. The melody consists of quarter notes and eighth notes. Below the staff are two empty staves for transcription.

g. Transpose up a major third, into the treble clef:

Musical notation for exercise g: A bass clef staff in 3/4 time with a key signature of two flats (B-flat and E-flat). The melody consists of two measures. The first measure contains a triplet of eighth notes (F3, G3, A3) followed by a quarter note (B2). The second measure contains a triplet of eighth notes (C4, D4, E4) followed by a quarter note (F4). Below the staff are two empty staves for writing the transposed version.

h. Transpose up a major sixth, into the alto clef:

Musical notation for exercise h: A bass clef staff in 3/4 time with a key signature of one flat (B-flat). The melody consists of two measures. The first measure contains a triplet of eighth notes (F3, G3, A3) followed by a quarter note (B2). The second measure contains a triplet of eighth notes (C4, D4, E4) followed by a quarter note (F4). Below the staff are two empty staves for writing the transposed version.

i. Transpose down a perfect fifth, into the bass clef:

Musical notation for exercise i: A bass clef staff in 3/4 time with a key signature of one sharp (F#). The melody consists of two measures. The first measure contains a quarter note (F#3), an eighth note (G3), and a quarter note (A3). The second measure contains a quarter note (B2), an eighth note (C3), and a quarter note (D3). Below the staff are two empty staves for writing the transposed version.

j. Transpose up a minor third, into the alto clef:

Musical notation for exercise j: A bass clef staff in 3/4 time with a key signature of two sharps (F# and C#). The melody consists of two measures. The first measure contains a triplet of eighth notes (F#3, G#3, A3) followed by a quarter note (B2). The second measure contains a triplet of eighth notes (C4, D4, E4) followed by a quarter note (F4). Below the staff are two empty staves for writing the transposed version.

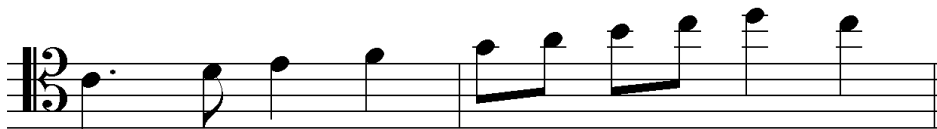
# worksheet

7. Write letter names underneath the notes (yes, the tied notes, too!).

a.



b.



c.



d.



e.



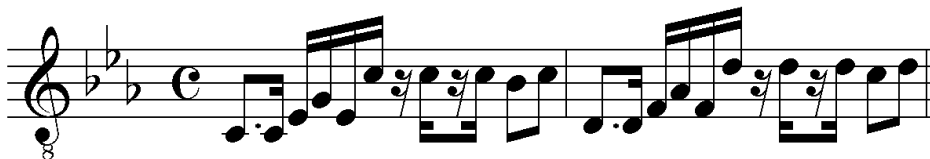
f.



g.



h.



i.



j.



8. Given the first note of each melody (and a key signature), place the correct clef at the beginning of the excerpt.

a.



Middle C

b.



F

# worksheet

c.

Musical staff c: Treble clef, key signature of two flats (B $\flat$ , E $\flat$ ), 6/8 time signature. The melody consists of eighth and quarter notes. The first note is E $\flat$ .

d.

Musical staff d: Treble clef, key signature of three sharps (F $\sharp$ , C $\sharp$ , G $\sharp$ ), 4/8 time signature. The melody consists of eighth and quarter notes. The first note is B.

e.

Musical staff e: Treble clef, key signature of no sharps or flats, C time signature. The melody consists of eighth and quarter notes. The first note is B.

f.

Musical staff f: Treble clef, key signature of no sharps or flats, C time signature. The melody consists of eighth and quarter notes. The first note is B.

g.

Musical staff g: Treble clef, key signature of three sharps (F $\sharp$ , C $\sharp$ , G $\sharp$ ), 3/4 time signature. The melody consists of eighth and quarter notes. The first note is A.

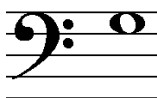
h.

Musical staff h: Treble clef, key signature of two flats (B $\flat$ , E $\flat$ ), 3/4 time signature. The melody consists of eighth and quarter notes. The first note is B $\flat$ .



# worksheet

9. Draw a line from the note on the left to the note of the same pitch on the right.



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# w o r k s h e e t

## Lesson 25: score formats

1. Fill in the blanks:

a. A score in which all parts have been placed on two or three staves is called either

\_\_\_\_\_ score, or \_\_\_\_\_ score.

b. A score that shows each part on its own staff is called either \_\_\_\_\_  
score, or \_\_\_\_\_ score.

c. A score that shows each vocal part on its own staff is called \_\_\_\_\_  
\_\_\_\_\_ score, or \_\_\_\_\_ score.

2. Take the following string quartet excerpts, and show it in close score format.

a.

Moderato

Violin I

Violin II

Viola

Cello

Two blank musical staves, one treble clef and one bass clef, for writing.

Two blank musical staves, one treble clef and one bass clef, for writing.

b.

**Maestoso**

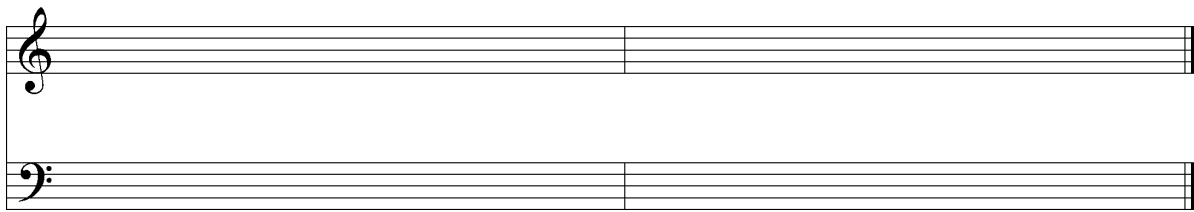
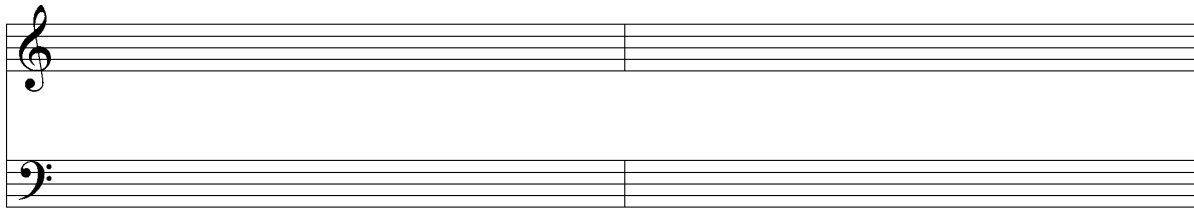
Violin I

Violin II

Viola

Cello

Musical score for Violin I, Violin II, Viola, and Cello. The score is in 3/4 time, marked **Maestoso**. The key signature has one flat (B-flat). The score consists of four measures. The Violin I part starts with a quarter note G4, followed by eighth notes A4, B4, and C5. The Violin II part starts with a quarter note G4, followed by eighth notes A4, B4, and C5. The Viola part starts with a quarter note G3, followed by eighth notes A3, B3, and C4. The Cello part starts with a quarter note G2, followed by eighth notes A2, B2, and C3. The score ends with a double bar line.



3. Take the following short score for choir, and rewrite it using modern vocal score format. Include the lyrics.

Day and night, Oo Day and night, and night and day.

Day and night, and night and day.

Soprano

Alto

Tenor

Bass

4. Take the following modern choral score and rewrite it into close score format. Include the lyrics.

a)

S

wid - dle - y wid - dle - y wum, 'Til they nid - dle - y ack nid - lde - y ack night night night.

A

wid - dle - y wid - dle - y wum, 'Til they nid - dle - y ack nid - lde - y ack night night night.

T

wum, night night night.

B

wid - dle - y wid - dle - y wum, night night night.

b.

*mp*

1. Quem pas - to - res lau - da - ve - re,  
2. Shep - herds left their flock a - stray ing.

*mp*

1. Quem pas - to - res lau - da - ve - re,  
2. Shep - herds left their flock a - stray ing.

1. Quem pas - to - res lau - da - ve - re,  
2. Shep - herds left their flock a - stray ing.

©1999, Gary Ewer

5. Take the following short score for string quartet and rewrite it into open score format.

Piano

# quizzes

---





# q u i z

## lesson 1: the grand staff

1. Fill in the blanks:

- a) A musical staff consists of \_\_\_\_ lines and \_\_\_\_ spaces.
- b) A pair of staves, joined by drawing a line down the left-hand side is called a \_\_\_\_\_ (two words)
- c) The symbol placed at the beginning of a staff to indicate pitch names is called a \_\_\_\_\_.

10

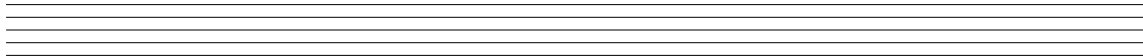
2. Draw a 5-line staff below, using a ruler:

·  
·  
·  
·  
·

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·  
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·

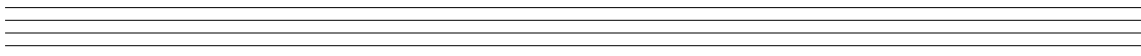
10

3. Draw 5 treble clefs on the staff below:



20

4. Draw 5 bass clefs on the staff below:



20

5. Using a ruler, draw a grand staff below. Place a treble clef in the top staff and a bass clef in the bottom staff:

-  
-  
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-  
-

-  
-  
-  
-  
-

-  
-  
-  
-  
-

-  
-  
-  
-  
-

40



# quiz

## lesson 2: notes

2

1. Musical notes are named for the first \_\_\_\_\_ letters of the alphabet.

2. Fill in the blocks with the proper letter names:

F G

E D

D F A

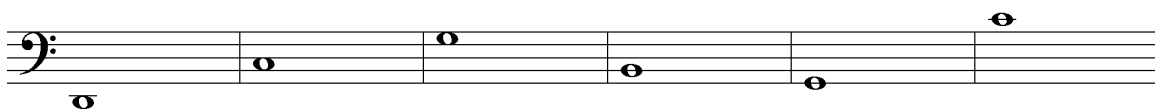
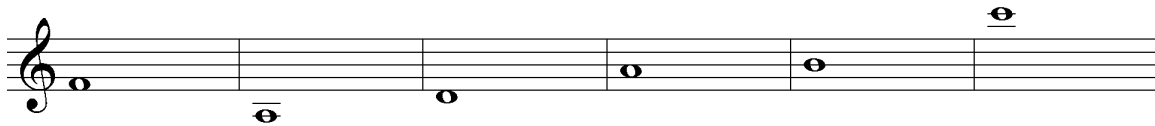
G E

B C

A C

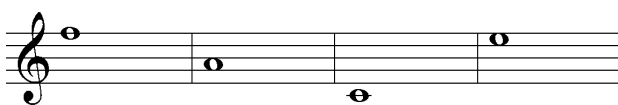
12

3. Identify the following notes by writing the correct letter name underneath.

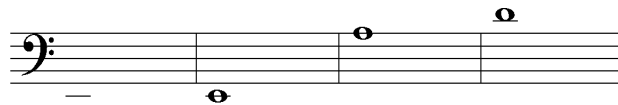


24

4. The following groups of notes spell well-known English words. Write the words.



word: \_ \_ \_ \_



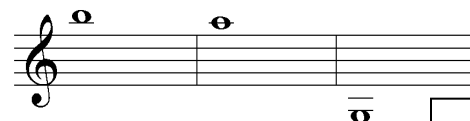
word: \_ \_ \_ \_



word: \_ \_ \_ \_ \_ \_ \_ \_



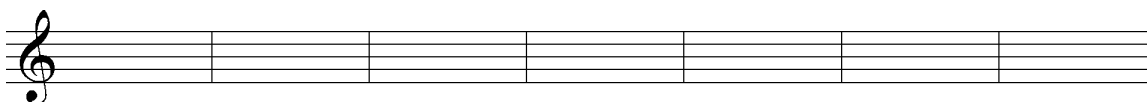
word: \_ \_ \_ \_



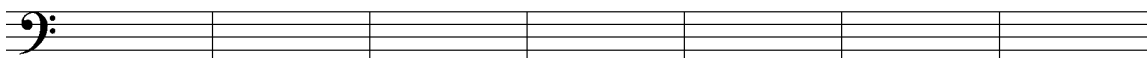
word: \_ \_ \_

22

5. Draw **two** notes for each letter name. Use leger lines as desired or as necessary.



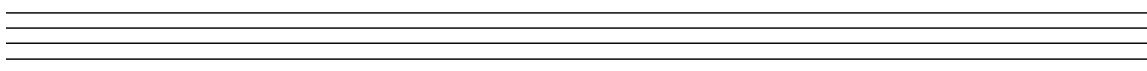
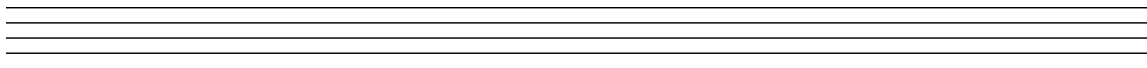
E          G          F          C          D          A          B



E          G          F          C          D          A          B

28

6. Connect the staves below with a vertical line down the left-hand side, creating a Grand Staff. Then draw a treble clef in the left area of the top staff, and bass clef in the left area of the bottom staff. Draw notes from a 1-leger-line E in the bass clef, up to a top-space-G in the treble, and correctly label all of the notes.



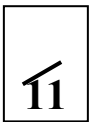
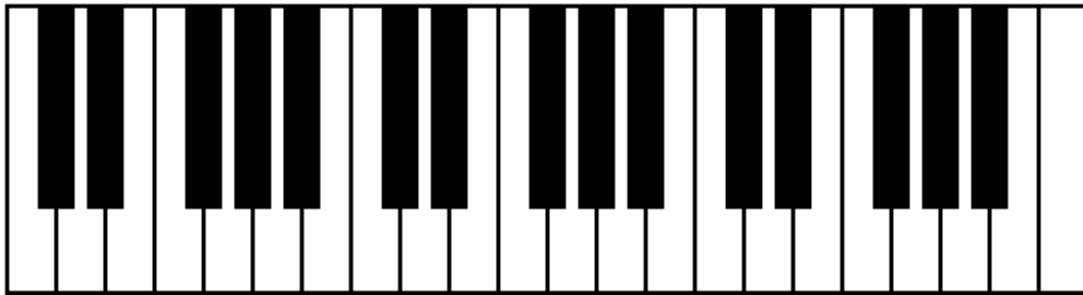
12



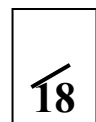
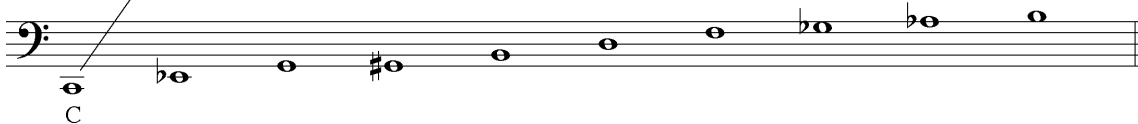
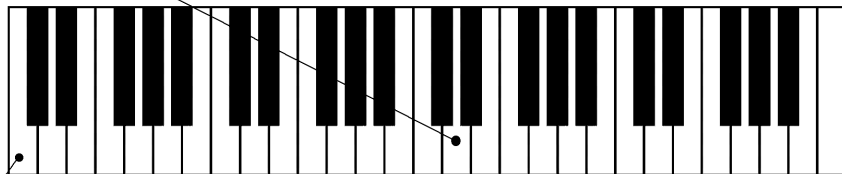
# quiz

## lesson 3: the keyboard

1. Label the white keys on the diagram below:



2. Write the correct letter name underneath each note. Then draw a line from the notes on the staff to the correct note on the keyboard:



3. Write the name of the note that is a semitone above the following notes. (There are two possible names):

a) G: \_\_\_\_\_

b) C: \_\_\_\_\_

c) A: \_\_\_\_\_

d) D: \_\_\_\_\_



4. Write the name of the note that is a semitone below the following notes. (There are two possible names):

a) E: \_\_\_\_\_

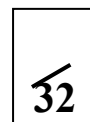
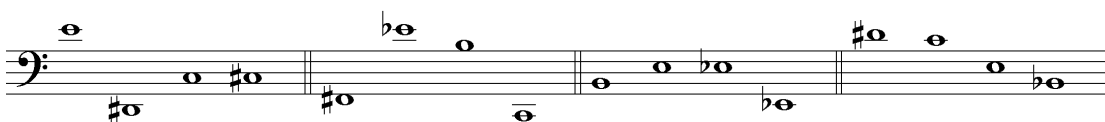
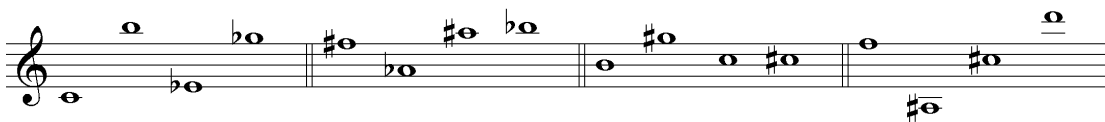
b) A: \_\_\_\_\_

c) G: \_\_\_\_\_

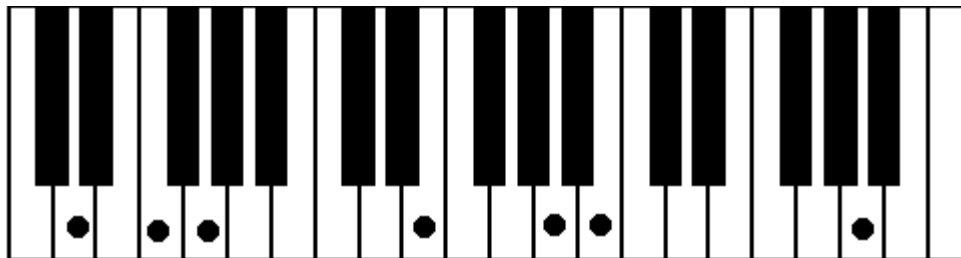
d) B: \_\_\_\_\_



5. Name the notes. **Be careful to check the clef at the beginning of each line!**



6. Using the diagram of the keyboard below, label the notes that are indicated with dots. Then write the note name that is a semitone **lower**. Most notes will require two answers.



Pitch name:      \_\_\_   \_\_\_   \_\_\_                      \_\_\_           \_\_\_   \_\_\_                      \_\_\_

Semitone lower,  
using a sharp (#)    C#   \_\_\_   \_\_\_                      \_\_\_           \_\_\_   \_\_\_                      \_\_\_

Semitone lower,  
using a flat (b)    Db   \_\_\_   \_\_\_                      \_\_\_           \_\_\_   \_\_\_                      \_\_\_

34
----

7. a) Name the note that is a semitone above the following:

i) F#   \_\_\_                      ii) Ab   \_\_\_                      iii) Gb   \_\_\_                      iv) D#   \_\_\_

2
---

- b) Name the note that is a semitone below the following:

i) Db   \_\_\_                      ii) G#   \_\_\_                      iii) C#   \_\_\_                      iv) Bb   \_\_\_

2
---





# quiz

## lesson 4: note durations

1. Fill in the chart below, assuming, as shown, that the **whole** note fills up an entire line:


20

2. If a whole note equals 4, fill in the number values for the following notes:

a. = \_\_\_\_\_    b. = \_\_\_\_\_    c. = \_\_\_\_\_

d. = \_\_\_\_\_    e. = \_\_\_\_\_    f. = \_\_\_\_\_

g. = \_\_\_\_\_    h. = \_\_\_\_\_

i. = \_\_\_\_\_    j. = \_\_\_\_\_

20

3. Write one note that correctly answers each "equation."

a.  $2+2 = \textcircled{\bullet}$

b.  $\frac{1}{2} + \frac{1}{2} + 1 = \underline{\hspace{2cm}}$

c.  $1+1+1+1 = \underline{\hspace{2cm}}$

d.  $3+1 = \underline{\hspace{2cm}}$

e.  $1+1+1 = \underline{\hspace{2cm}}$

f.  $\frac{1}{2} + \frac{1}{2} + 3 = \underline{\hspace{2cm}}$

g.  $1+1 = \underline{\hspace{2cm}}$

h.  $2 + \frac{1}{2} + \frac{1}{2} = \underline{\hspace{2cm}}$

i.  $1+2 = \underline{\hspace{2cm}}$

j.  $\frac{1}{2} + \frac{1}{2} = \underline{\hspace{2cm}}$

k.  $1 + 2 + \frac{1}{2} + \frac{1}{2} = \underline{\hspace{2cm}}$



4. Write a dotted note that equals each of the following.

a. =           

b. =           

c. =           

d. =           

e. =           



5. Fill in the blanks:

Four quarter notes =          whole note(s).

Four eighth notes =          quarter note(s).

One quarter note =          sixteenth note(s).

Two whole notes =          half note(s).

Three quarter notes =          dotted half note(s).

Eight sixteenth notes =          quarter note(s).

Six eighth notes =          quarter note(s).

One whole note =          eighth note(s).

One dotted half note =          quarter note(s).

Two sixteenth notes =          eighth note(s).



6. Answer the following questions by placing a T (true) or an F (false) in the blank space.

A flag doubles the length of a note. \_\_\_\_\_

A quarter note is equal to two eighth notes. \_\_\_\_\_

A dot adds half the length of a note. \_\_\_\_\_

A whole note is equal to two half notes. \_\_\_\_\_

A half note equals three eighth notes. \_\_\_\_\_

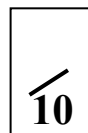
A flag cuts the value of a note in half. \_\_\_\_\_

A half note is equal to three tied eighth notes. \_\_\_\_\_

A dotted half note equals two tied half notes. \_\_\_\_\_

A half note equals four eighth notes. \_\_\_\_\_

An eighth note equals two quarter notes. \_\_\_\_\_





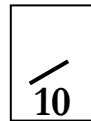


# quiz

## lesson 5: durations, part 2

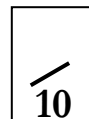
1. Fill in the blanks.

- a. One quarter note = \_\_\_\_\_ sixteenth note(s).
- b. Two eighth notes = \_\_\_\_\_ quarter note(s).
- c. One whole note = \_\_\_\_\_ eighth note(s).
- d. Two half notes = \_\_\_\_\_ whole note(s).
- e. Eight sixteenth notes = \_\_\_\_\_ eighth note(s).



2. Complete the following table by drawing notes.

●															



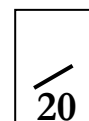
3. Change the following tied notes to one note of equal value. (Some notes may require dots.)

a)  = \_\_\_\_\_      e)  = \_\_\_\_\_      i)  = \_\_\_\_\_

b)  = \_\_\_\_\_      f)  = \_\_\_\_\_      j)  = \_\_\_\_\_

c)  = \_\_\_\_\_      g)  = \_\_\_\_\_

d)  = \_\_\_\_\_      h)  = \_\_\_\_\_

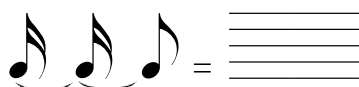
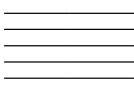


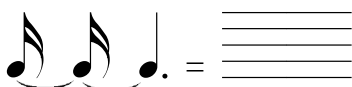
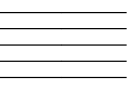
4. Combine the following tied notes, but instead of writing a note, write a rest of equivalent value.

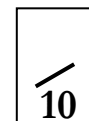
a)  = 

b)  = 

c)  = 

d)  = 

e)  = 





d)  $\text{♩.} = \underline{\hspace{1cm}} + \text{♩}$

i)  $\text{♩} = \text{♩} + \text{♩} + \underline{\hspace{1cm}}$

e)  $\text{♩} = \text{♪} + \text{♪} + \underline{\hspace{1cm}}$

j)  $\text{♩} = \text{♪} + \underline{\hspace{1cm}}$

20

8. Draw a line from each group of notes to the rest of equal value.



10



# quiz

## lesson 6: measures

1. Complete the following statements.

a.  $\frac{4}{4}$  means that there are \_\_\_\_\_ quarter beats in each bar.

b. In a  $\frac{2}{4}$  bar, the \_\_\_\_\_ note gets the beat.

c. In music written in \_\_\_\_\_ time, there are 3 quarter note beats.

d. How many beats are there in a bar of music written in  $\frac{4}{2}$ ? \_\_\_\_\_

e. In a  $\frac{3}{2}$  bar, the \_\_\_\_\_ note gets the beat.



2. Draw bar lines in the following examples, then write the counts underneath.

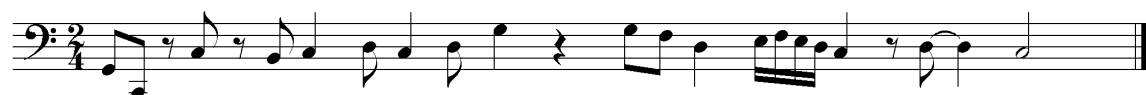
a.



b.



c.



d.



e.



f.



g.



h.



i.



j.



3. Write the correct time signature at the beginning of each excerpt. Then write the counts underneath.

a.



b.



c.



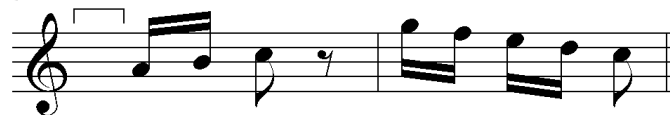
d.



e.



f.



g.



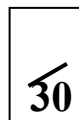
h.



i.



j.



4. Fill in the blanks.

A time signature with:

a. Four beats, where the quarter note is the beat: \_\_\_\_\_ or \_\_\_\_\_

b. Three beats, where the eighth note is the beat: \_\_\_\_\_

c. Four beats, where the half note is the beat: \_\_\_\_\_

d. Two beats, where the quarter note is the beat: \_\_\_\_\_

e. Eight beats, where the eighth note is the beat: \_\_\_\_\_

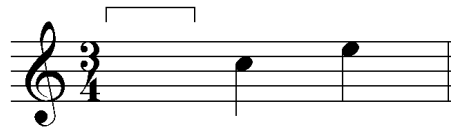


5. Fill in the bracketed areas with one rest of the correct length. Write letter names under each note.

a.



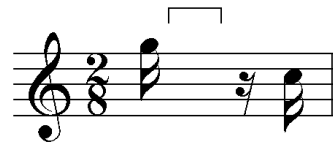
b.



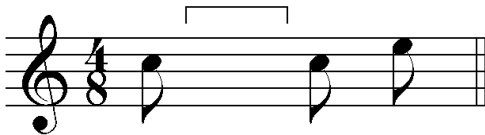
c.



d.



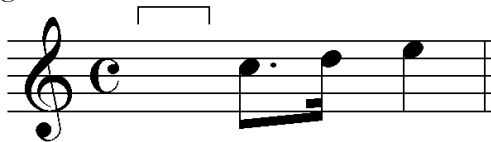
e.



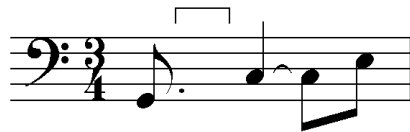
f.



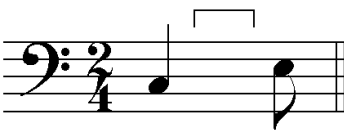
g.



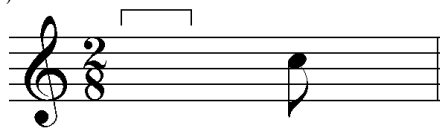
h.



i.



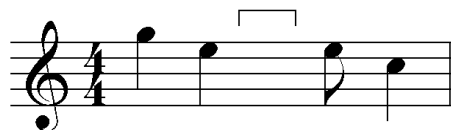
j.



k.



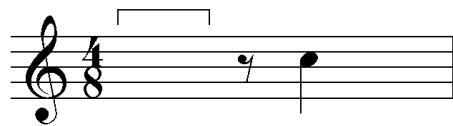
l.



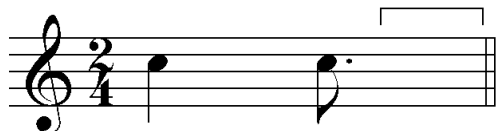
m.



n.



o.



p.



30

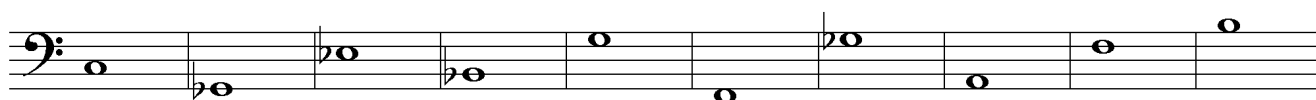




# quiz

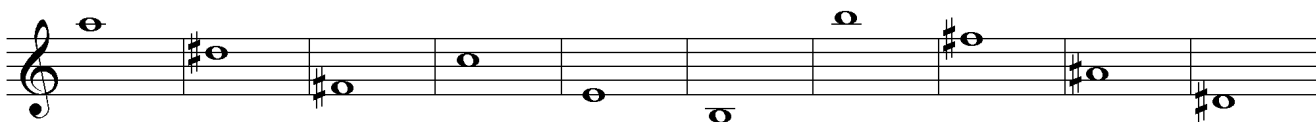
## lesson 7: small intervals

1. Write the note that is a chromatic semitone above the following notes.



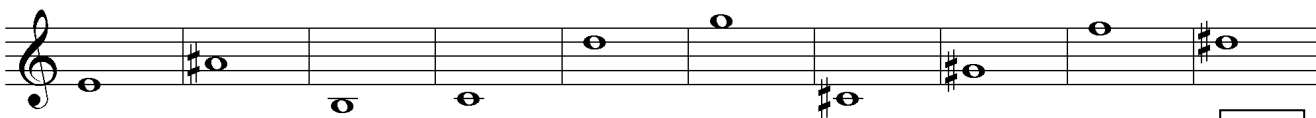
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2. Write the note that is a chromatic semitone below the following notes.



10

3. Write the note that is a diatonic semitone above the following notes.



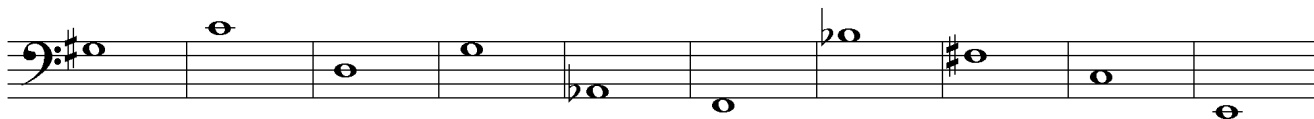
10

4. Write the note that is a diatonic semitone below the following notes.



10

5. Write the note that is a whole tone below the following notes.



10

6. Write the note that is a whole tone above the following notes.



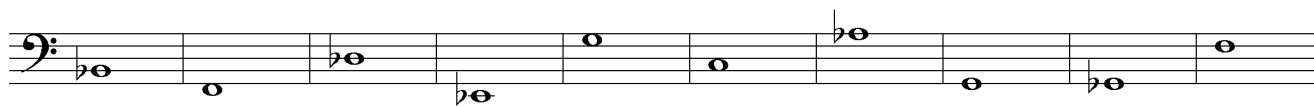
10

7. Label the following intervals as **chromatic semitone (C)**, **diatonic semitone (D)**, or **whole tone (WT)**.



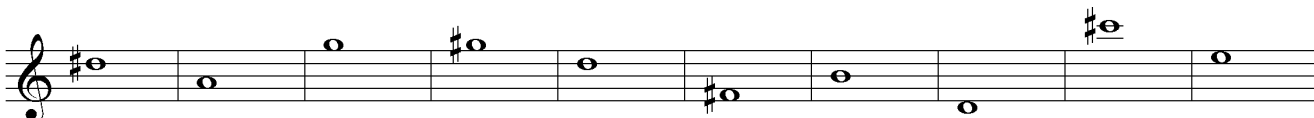
10

8. Write the note that is a tone-plus-semitone above.



10

9. Write the note that is a tone-plus-semitone below.



10

10. Label the following intervals as **chromatic semitone (C)**, **diatonic semitone (D)**, **whole tone (WT)**, or **tone-plus-semitone (T♯T)**.



10





# quiz

## lesson 8: major scales

1. Complete the list of solfa syllables for major scales.

Note Number: 1      2      3      4      5      6      7      8(1)

Solfa Name: do    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_

16

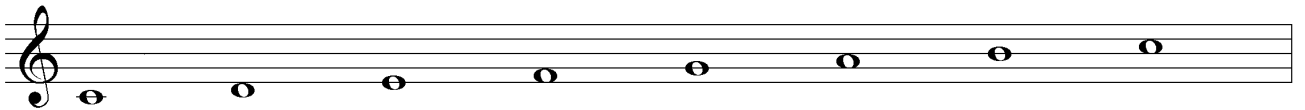
2. Complete the tone-semitone pattern for major scales.

\_\_\_\_\_

14

3. In the following C major scale:

- Mark tones with a square bracket.
- Mark semitones with a rounded slur.
- Number the notes.
- Write the solfa names under each note.

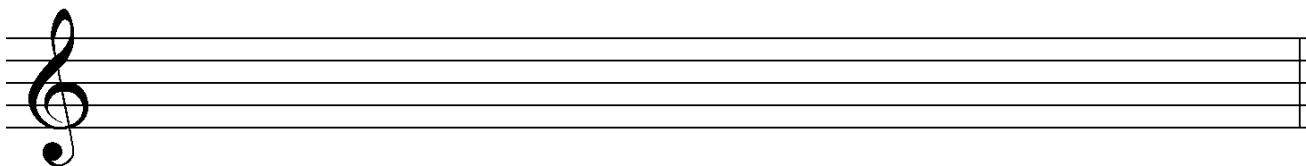


\_\_\_\_\_

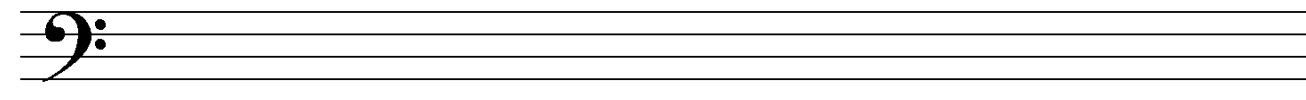
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4. Write the following major scales:

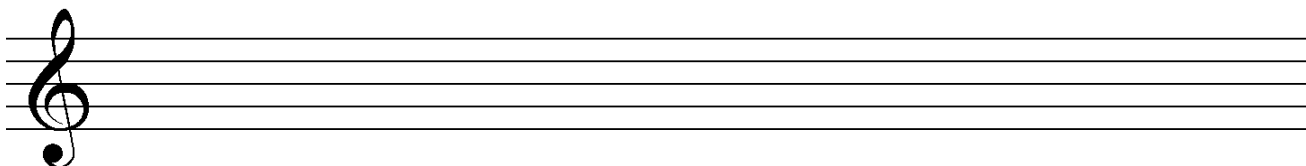
a. D major, ascending, treble clef, quarter notes.



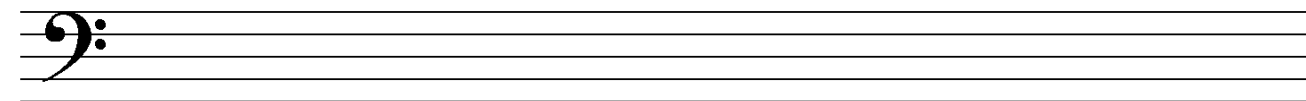
b. F major, ascending, bass clef, whole notes.



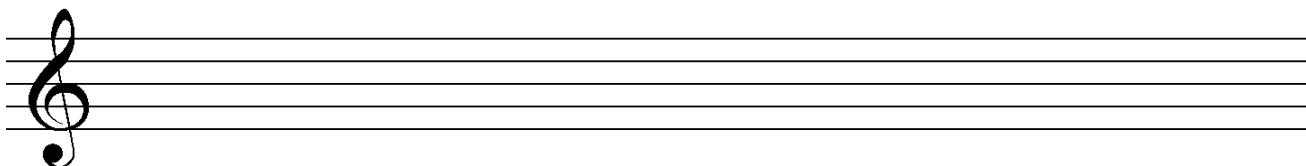
c. A major, descending, treble clef, half notes.



d. Db major, ascending, bass clef, sixteenth notes.



e. E major, descending, treble clef, whole notes.





# quiz

## lesson 9: key signatures

1. Complete the following:

a. When sharps you see, \_\_\_\_\_

b. When flats there are, \_\_\_\_\_

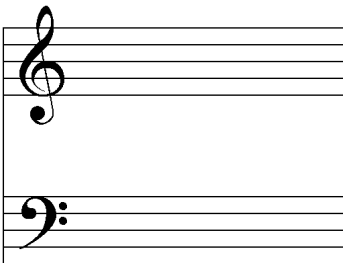
c. Battle ends \_\_\_\_\_

d. Father Charles \_\_\_\_\_

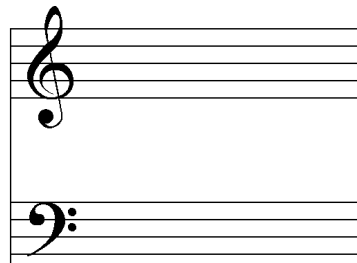


2. Write the key signature that uses all seven flats, in both clefs. Then write the key signature that uses all seven sharps.

Flats:



Sharps:



3. Correct the errors in the following key signatures.


wrong:



correct:




wrong:



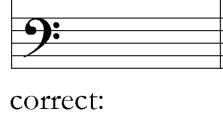
correct:



wrong:



correct:




wrong:



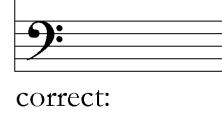
correct:



wrong:



correct:



20

(Question 4 on next page)

4. Re-write the following scales, using a key signature instead of accidentals.

B Major

Musical notation for the B Major scale in treble clef. The scale is written on a single staff with two lines. The notes are: B2 (whole), C#3 (quarter), D#3 (quarter), E3 (quarter), F#3 (quarter), G#3 (quarter), A3 (quarter), B3 (half). The accidentals are sharps for C, D, F, and G.

D Major:

Musical notation for the D Major scale in bass clef. The scale is written on a single staff with two lines. The notes are: D2 (whole), E2 (quarter), F#2 (quarter), G2 (quarter), A2 (quarter), B2 (quarter), C#3 (quarter), D3 (half). The accidentals are sharps for F and C.

Gb Major

Musical notation for the Gb Major scale in treble clef. The scale is written on a single staff with two lines. The notes are: Gb2 (whole), Ab2 (quarter), Bb2 (quarter), C3 (quarter), Db3 (quarter), Eb3 (quarter), F3 (quarter), Gb3 (half). The accidentals are flats for G, A, B, D, and E.

F# Major

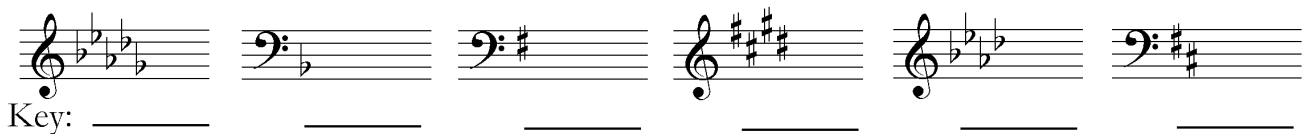
Musical notation for the F# Major scale in bass clef. The scale is written on a single staff with two lines. The notes are: F#2 (whole), G#2 (quarter), A#2 (quarter), B#2 (quarter), C3 (quarter), D#3 (quarter), E#3 (quarter), F#3 (half). The accidentals are sharps for F, G, A, B, D, and E.

32

12

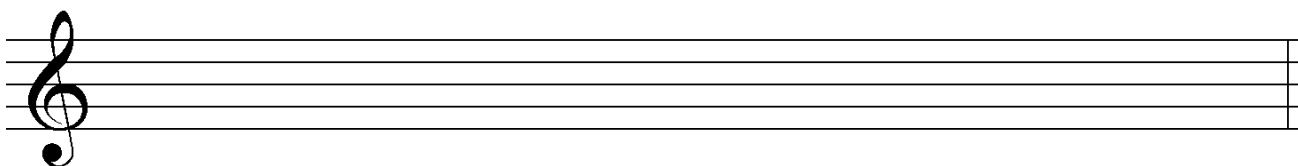
5. Identify the major keys that are indicated by the following key signatures:

Key: \_\_\_\_\_

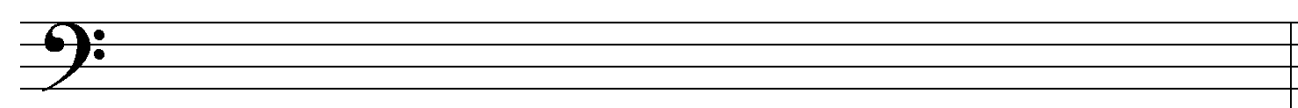


6. Write the following scales, ascending and descending, using key signatures.

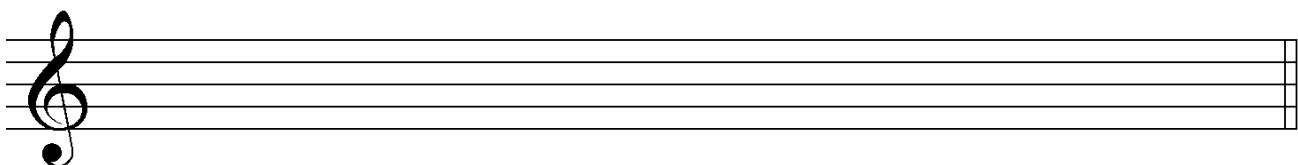
A Major:



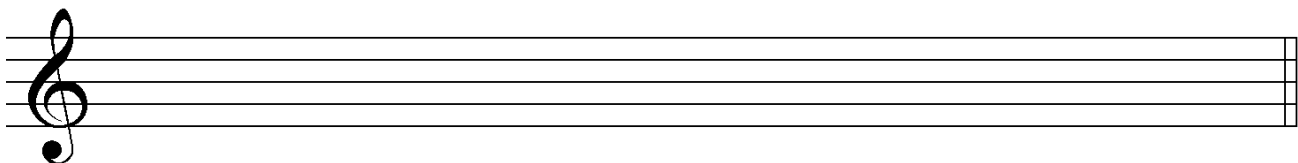
Eb Major:



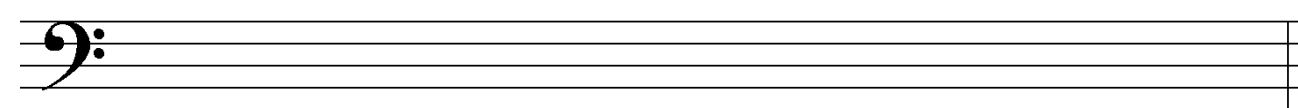
C Major:



Bb Major:



C# Major:



20

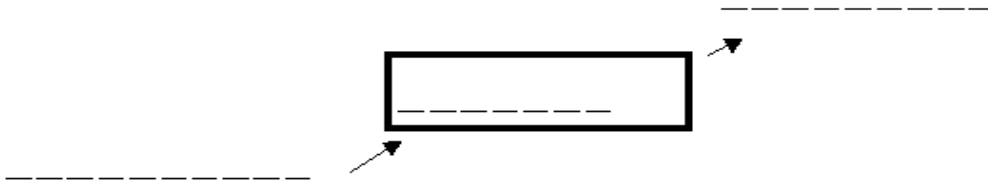


# quiz

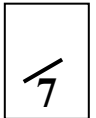
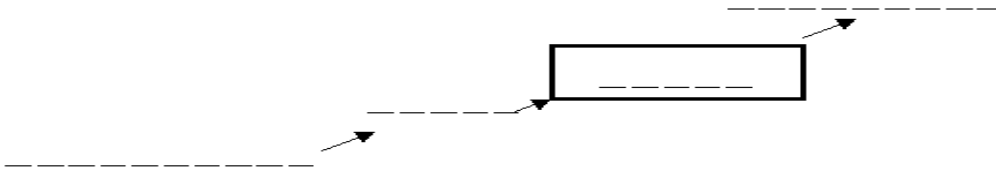
## lesson 10: intervals

1. Complete the following.

a. For the intervals 1, 4, 5, or 8, there are three possible **qualities** of interval:



b. For the intervals 2, 3, 6, and 7, there are four possible qualities:



2. Complete the following.

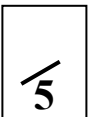
a. When you increase a perfect interval by one semitone, it becomes \_\_\_\_\_.

b. When you decrease an augmented sixth by two semitones, it becomes \_\_\_\_\_.

c. When you decrease a major third by two semitones, it becomes \_\_\_\_\_.

d. When you increase a diminished seventh by three semitones, it becomes \_\_\_\_\_.

e. When you decrease an augmented fourth by one semitone, it becomes \_\_\_\_\_.



3. Write the requested intervals above the given note.

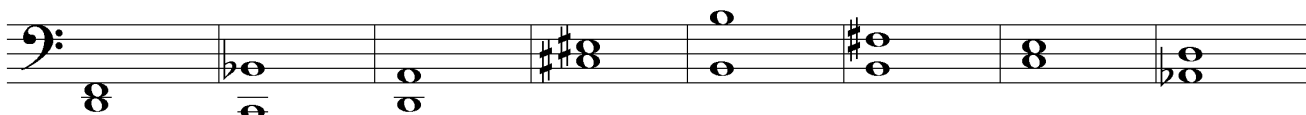
+6      -2      +3      P8      X5      +2      -3      -6

-2      P4      +3      °3      +7      +6      °5      +2

+7      -6      -3      +3      P5      P4      -7      -3

+6      +2      P8      -7      P4      +2      X4      X5

4. Identify the following intervals. Write your answer under each interval.



5. Write the note below the given note, in accordance with the specified interval..

Bass clef staff with notes and intervals:

+7	+6	-2	X4	+3	X5	P8	-3

Treble clef staff with notes and intervals:

-7	-3	+6	-7	X3	P5	X4	+3

Bass clef staff with notes and intervals:

-3	+6	°7	P4	X5	+2	-2	+6





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# quiz

## lesson 11: inverting intervals

1. Complete the following tables:

(a.)

i. Unisons invert to become \_\_\_\_\_.

ii. Seconds invert to become \_\_\_\_\_.

iii. Thirds invert to become \_\_\_\_\_.

iv. Fourths invert to become \_\_\_\_\_.

v. Fifths invert to become \_\_\_\_\_.

vi. Sixths invert to become \_\_\_\_\_.

vii. Sevenths invert to become \_\_\_\_\_.

viii. Octaves invert to become \_\_\_\_\_.

(b.)

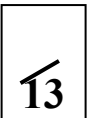
i. Major intervals invert to become \_\_\_\_\_.

ii. Minor intervals invert to become \_\_\_\_\_.

iii. Augmented intervals invert to become \_\_\_\_\_.

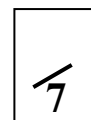
iv. Diminished intervals invert to become \_\_\_\_\_.

v. Perfect intervals invert to become \_\_\_\_\_.



2. Complete the following.

- a. A minor sixth inverts to become a \_\_\_\_\_.
- b. A major seventh inverts to become a \_\_\_\_\_.
- c. A \_\_\_\_\_ inverts to become a perfect fifth.
- d. A major third inverts to become a \_\_\_\_\_.
- e. A \_\_\_\_\_ second inverts to become a diminished seventh.
- f. A perfect fifth inverts to become a \_\_\_\_\_.
- g. A major second inverts to become a \_\_\_\_\_.



3. Write the requested interval. Then invert the interval (using either method) and name it.

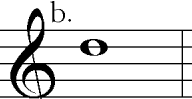
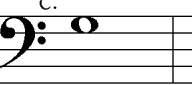

a. +6↑ —    b. +3↓ —    c. P4↑ —    d. Aug4↓ —

e. -2↓ —    f. Aug6↑ —    g. dim4↓ —    h. +2↓ —


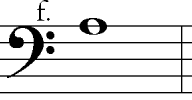
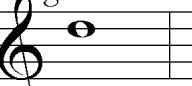
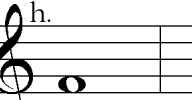
i. Aug3↑ —    j. P5↑ —





4. Write the requested interval. Then invert the interval (using either method) and name it.

a.  || b.  || c.  || d. 

+2↑    \_\_\_    +6↓    \_\_\_    Aug4↓    \_\_\_    +3↑    \_\_\_

e.  || f.  || g.  || h. 

P5↑    \_\_\_    -6↓    \_\_\_    +3↓    \_\_\_    Aug4↑    \_\_\_

i.  || j. 

-7↑    \_\_\_    P4↑    \_\_\_







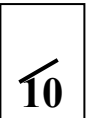
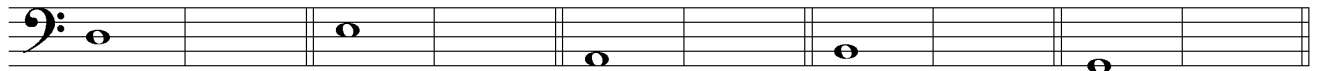
# quiz

## lesson 12: minor scales

1. Write the note that is two semitones *above* the given note, using the same letter name.



2. Write the note that is two semitones *below* the given note, using the same letter name.



3. Name the relative minor key of the following major keys:

a. F Major: \_\_\_\_\_

f. Eb Major: \_\_\_\_\_

b. D Major: \_\_\_\_\_

g. B Major: \_\_\_\_\_

c. Bb Major: \_\_\_\_\_

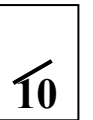
h. F# Major: \_\_\_\_\_

d. G Major: \_\_\_\_\_

i. Ab Major: \_\_\_\_\_

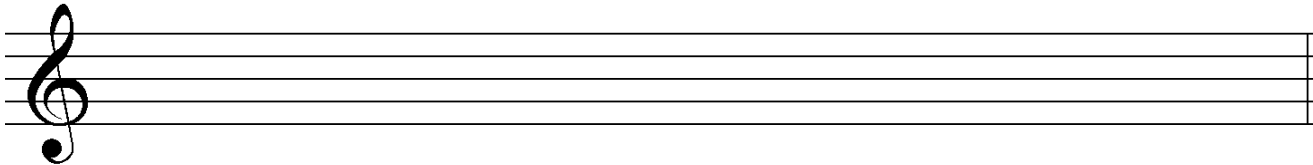
e. Gb Major: \_\_\_\_\_

j. C Major: \_\_\_\_\_

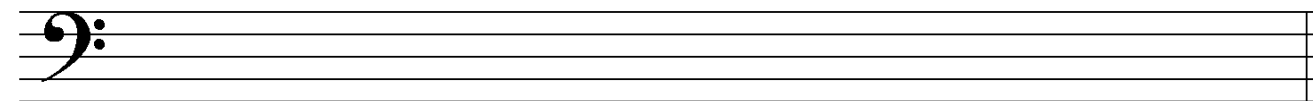


4. Write the following scales, ascending *and* descending. Use a key signature. Write the solfa names under each note.

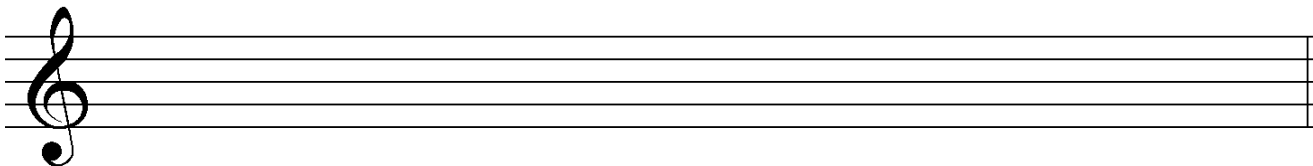
a. F-, melodic:



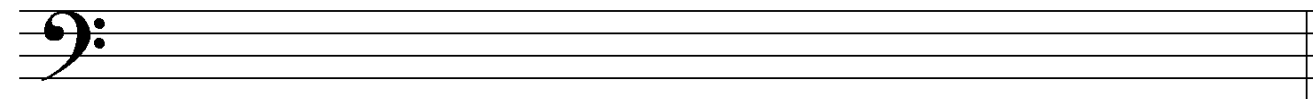
b. C-, harmonic:



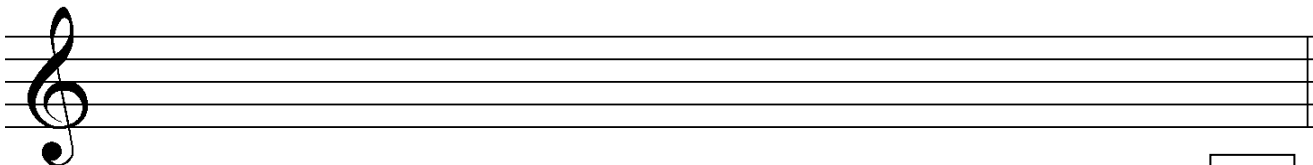
c. C#, natural:



d. G-, melodic:



e. D-, melodic:



30

5. Name the relative major of the following minor keys.

a. A- : \_\_\_\_\_

f. B- : \_\_\_\_\_

b. D- : \_\_\_\_\_

g. G- : \_\_\_\_\_

c. F#- : \_\_\_\_\_

h. E- : \_\_\_\_\_

d. F- : \_\_\_\_\_

i. G- : \_\_\_\_\_

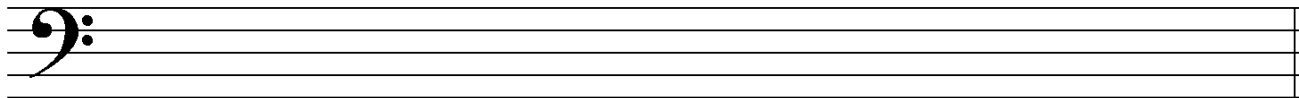
e. C#- : \_\_\_\_\_

j. Eb- : \_\_\_\_\_

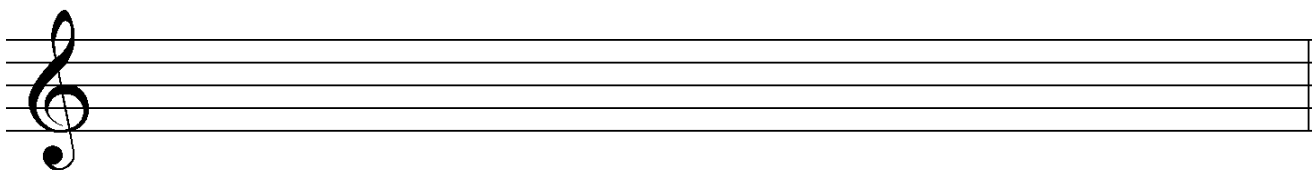
10

6. Write the following scales, ascending *and* descending. Use a key signature.

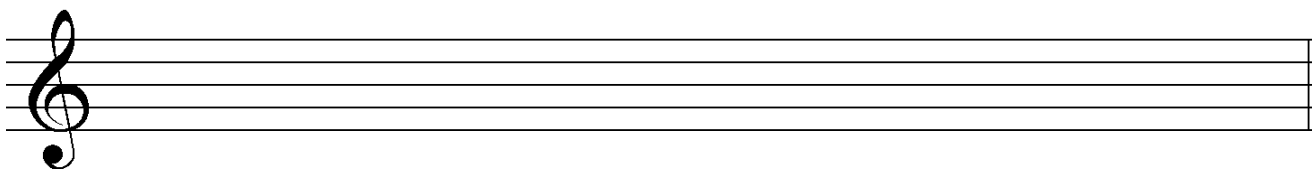
a. G#-, harmonic:



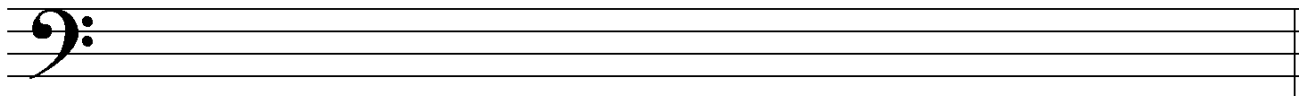
b. B-, natural:



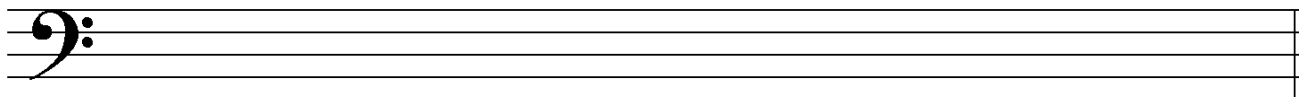
c. A-, melodic:



d. F#-, harmonic:



e. Eb-, melodic:





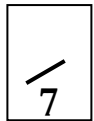
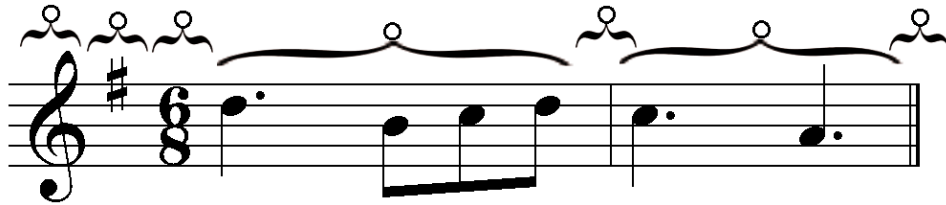


# quiz

## lesson 13: time signatures

1. Label the music by drawing lines from the words to the corresponding musical features:

- |                  |       |
|------------------|-------|
| Final double bar | _____ |
| Bar line         | _____ |
| Key signature    | _____ |
| Measure 2        | _____ |
| Measure 1        | _____ |
| Clef             | _____ |
| Time Signature   | _____ |



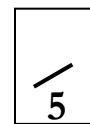
2. Fill in the blanks:

- In simple time, the beat is a(n) \_\_\_\_\_ (*dotted/ undotted?*) note.
- Compound time signatures tell us the number of \_\_\_\_\_ (*two words*) in each bar.
- Simple time signatures tell us how many \_\_\_\_\_ are in each bar.
- In compound time, the top number *is* evenly divisible by the number \_\_\_\_\_.
- In simple time, the top number is *not* evenly divisible by the number \_\_\_\_\_.
- In compound time, the beat is a(n) \_\_\_\_\_ (*dotted/ undotted?*) note.
- In simple time, the beat breaks down into \_\_\_\_\_ parts.
- In compound time, the beat breaks down into \_\_\_\_\_ parts.



3. Place an S after the time signatures that are usually **simple** time signatures, and a C after the ones that are **compound**:

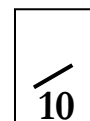
a.  $\frac{12}{8}$  \_\_\_\_\_    b.  $\frac{4}{8}$  \_\_\_\_\_    c.  $\frac{6}{8}$  \_\_\_\_\_    d.  $\frac{4}{4}$  \_\_\_\_\_    e.  $\frac{3}{4}$  \_\_\_\_\_



4. Here are some **simple** time signatures. Write the number of beats you would find in each bar, in the first space following the time signature. Then draw the kind of note that gets the beat.

a.  $\mathbf{C}$  = \_\_\_\_\_    b.  $\frac{4}{4}$  = \_\_\_\_\_    c.  $\frac{8}{8}$  = \_\_\_\_\_

d.  $\frac{2}{2}$  = \_\_\_\_\_    e.  $\frac{3}{4}$  = \_\_\_\_\_



5. In the following musical excerpts, draw in the missing bar lines, then write the beats above each bar:

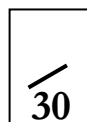
a.

Beats: \_\_\_\_\_



b.

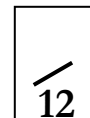
Beats: \_\_\_\_\_



6. Here are some **compound** time signatures. Write the number of beats you would find in each bar, in the first space following the time signature. Then draw the kind of note that gets the beat.

a.  $\frac{6}{4} = \underline{\quad\quad}$     b.  $\frac{6}{8} = \underline{\quad\quad}$     c.  $\frac{9}{16} = \underline{\quad\quad}$

d.  $\frac{12}{8} = \underline{\quad\quad}$     e.  $\frac{9}{8} = \underline{\quad\quad}$     f.  $\frac{12}{16} = \underline{\quad\quad}$



7. Place beats, and breakdown beats in each of the following excerpts.

a.

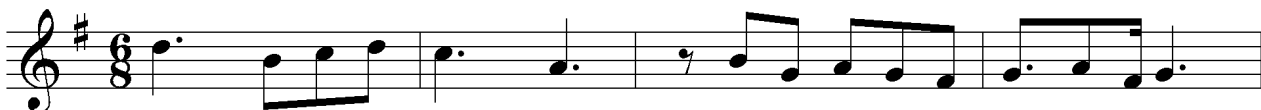
Beats: \_\_\_\_\_



Breakdown: \_\_\_\_\_

b.

Beats: \_\_\_\_\_



Breakdown: \_\_\_\_\_







# quiz

## lesson 14: measure completion

1. Label the following time signatures as being either simple (S) or compound (C).

a.  $\frac{3}{4}$  \_\_\_\_\_ f.  $\frac{C}{4}$  \_\_\_\_\_

b.  $\frac{6}{8}$  \_\_\_\_\_ g.  $\frac{C}{8}$  \_\_\_\_\_

c.  $\frac{12}{4}$  \_\_\_\_\_ h.  $\frac{3}{8}$  \_\_\_\_\_

d.  $\frac{6}{4}$  \_\_\_\_\_ i.  $\frac{4}{4}$  \_\_\_\_\_

e.  $\frac{4}{2}$  \_\_\_\_\_ j.  $\frac{9}{8}$  \_\_\_\_\_

20

2. Complete the following sentences.

a) In compound time, each beat breaks down into \_\_\_\_\_ breakdown notes.

b) In simple time, the top number represents the number of \_\_\_\_\_ per bar.

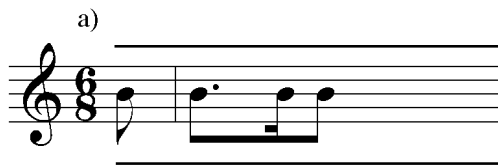
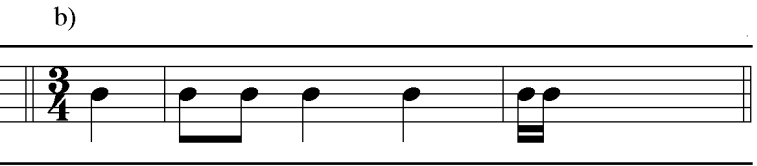
c) In compound time, the top number represents the number of \_\_\_\_\_ notes per bar.

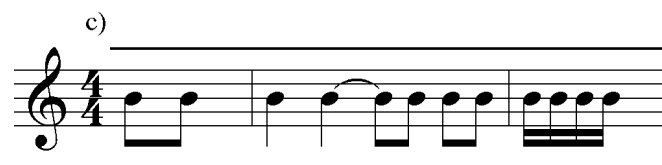

d) In simple time, the \_\_\_\_\_ (top/bottom?) number is a "code" for the type of note that gets the beat.



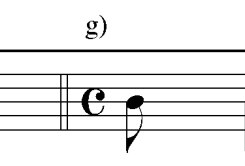
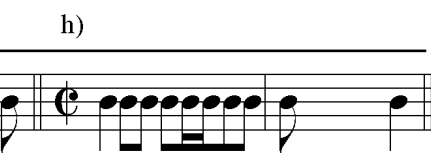
e) In compound time, the beat is always a(n) \_\_\_\_\_ (dotted/undotted?) note.

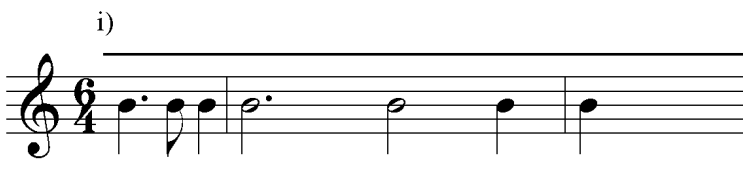
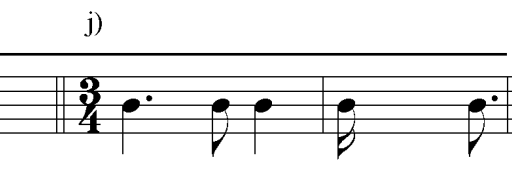
20

3. Complete the following bars with the appropriate rests where indicated. Show the beat and breakdown.



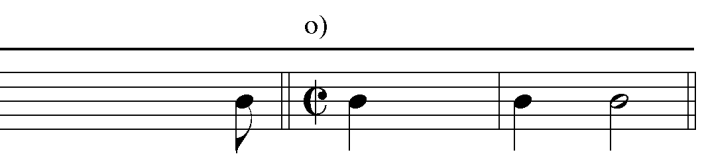
a)  b) 

c)  d) 

e)  f)  g)  h) 

i)  j) 

k)  l) 

m)  n)  o) 

p) q) r)

Exercise p) is in 3/2 time, showing two quarter notes. Exercise q) is in 4/4 time, showing a dotted quarter note followed by an eighth note. Exercise r) is in 2/4 time, showing a quarter note followed by another quarter note.

s) t)

Exercise s) is in 6/4 time, showing a dotted half note. Exercise t) is in 3/4 time, showing a dotted quarter note followed by an eighth note, then a quarter note, and finally a quarter note followed by an eighth note.







# quiz

## lesson 15: tonic and dominant triads

1. Fill in the blanks.

- a. The tonic note of B-flat major is \_\_\_\_\_.
- b. The dominant note of E minor is \_\_\_\_\_.
- c. The \_\_\_\_\_ note of G major is D.
- d. The \_\_\_\_\_ note of C major is C.
- e. The tonic note of \_\_\_\_\_ major is F.
- f. The dominant note of G minor is \_\_\_\_\_.
- g. The tonic note of \_\_\_\_\_ major is D.
- h. The dominant note of C-sharp major is \_\_\_\_\_.
- i. The dominant note of C minor is \_\_\_\_\_.
- j. The tonic note of \_\_\_\_\_ major is D-flat.


10


2. Fill in the blanks.


- a. A chord is \_\_\_\_\_ or more notes sounding together.
- b. A \_\_\_\_\_ is a three-note chord made up of a root, 3<sup>rd</sup> and 5<sup>th</sup>.


4


3. Identify the notes in the following triads as being either a root, 3<sup>rd</sup> or 5<sup>th</sup>. Name the key of each one.

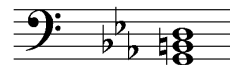
a) Key: \_\_\_\_\_ 5th: \_\_\_\_\_  
 3rd: \_\_\_\_\_  
  
 i root: \_\_\_\_\_

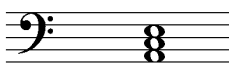
b) Key: \_\_\_\_\_ 5th: \_\_\_\_\_  
 3rd: \_\_\_\_\_  
  
 V root: \_\_\_\_\_

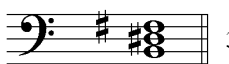
c) Key: \_\_\_\_\_ 5th: \_\_\_\_\_  
 3rd: \_\_\_\_\_  
  
 V root: \_\_\_\_\_


d) Key: \_\_\_\_\_ 5th: \_\_\_\_\_  
 3rd: \_\_\_\_\_  
  
 V root: \_\_\_\_\_

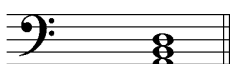
e) Key: \_\_\_\_\_ 5th: \_\_\_\_\_  
 3rd: \_\_\_\_\_  
  
 I root: \_\_\_\_\_


f) Key: \_\_\_\_\_ 5th: \_\_\_\_\_  
 3rd: \_\_\_\_\_  
  
 V root: \_\_\_\_\_


g) Key: \_\_\_\_\_ 5th: \_\_\_\_\_  
 3rd: \_\_\_\_\_  
  
 i root: \_\_\_\_\_

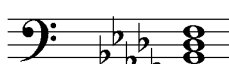
h) Key: \_\_\_\_\_ 5th: \_\_\_\_\_  
 3rd: \_\_\_\_\_  
  
 V root: \_\_\_\_\_

i) Key: \_\_\_\_\_ 5th: \_\_\_\_\_  
 3rd: \_\_\_\_\_  
  
 I root: \_\_\_\_\_

j) Key: \_\_\_\_\_ 5th: \_\_\_\_\_  
 3rd: \_\_\_\_\_  
  
 V root: \_\_\_\_\_

k) Key: \_\_\_\_\_ 5th: \_\_\_\_\_  
 3rd: \_\_\_\_\_  
  
 I root: \_\_\_\_\_

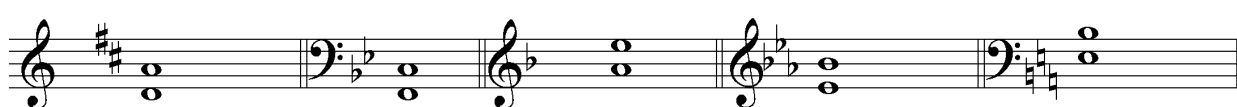
l) Key: \_\_\_\_\_ 5th: \_\_\_\_\_  
 3rd: \_\_\_\_\_  
  
 V root: \_\_\_\_\_

m) Key: \_\_\_\_\_ 5th: \_\_\_\_\_  
 3rd: \_\_\_\_\_  
  
 i root: \_\_\_\_\_

26


4. Complete the triads by adding the missing 3<sup>rd</sup>.

a) Key: \_\_\_\_\_ b) Key: \_\_\_\_\_ c) Key: \_\_\_\_\_ d) Key: \_\_\_\_\_ e) Key: \_\_\_\_\_



I V V I V

f) Key: \_\_\_\_\_ g) Key: \_\_\_\_\_ h) Key: \_\_\_\_\_ i) Key: \_\_\_\_\_ j) Key: \_\_\_\_\_




i I V V V

20


5. Identify the following triads as tonic or dominant--write I or V underneath each one.

a) G-major      b) G-minor      c) A-minor      d) E $\flat$ -major      e) F $\sharp$ -minor



\_\_\_\_\_

f) D-minor      g) E-major      h) B-minor      i) C-minor      j) F-major



\_\_\_\_\_

20


6. Write the key signature and triads according to the Roman numerals.

a) G-major      b) B $\flat$ -minor      c) D-major      d) E-major      e) A-minor



V                      V                      I                      I                      V

f) B $\flat$ -major      g) E $\flat$ -minor      h) E $\flat$ -major      i) C-major      j) C-minor



I                      V                      I                      V                      V

20





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# quiz

## lesson 16: key identification

1. For each key shown below, write the tonic note, the dominant note, and the leading tone.

Key	Tonic	Dominant	Leading tone
C-major			
G#-minor			
D-minor			
F-major			
C#-minor			
A-major			
E-major			
Ab major			
C-minor			
B-minor			
E-major			

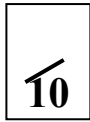
33

2. For each key shown below, write the tonic and dominant triads. Use a key signature.

a) A-major                      b) F-minor                      c) D-major

d) C-minor                      e) F#-major                      f) A♭-major

g) B-minor                      h) G-minor                      i) E♭-major                      j) A-minor



3. Each of the following excerpts uses accidentals instead of a key signature. Rewrite each excerpt, replacing accidentals (where possible) with a key signature.

a.                                      b.

c.                                      d.                                      e.

f. g.

35

4. Determine the key for each of the following excerpts.

a) Key: \_\_\_\_\_

b) Key: \_\_\_\_\_

c) Key: \_\_\_\_\_

d) Key: \_\_\_\_\_ (4 points)

e) Key: \_\_\_\_\_

f) Key: \_\_\_\_\_

g) Key: \_\_\_\_\_

22



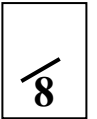


# quiz

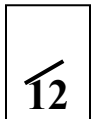
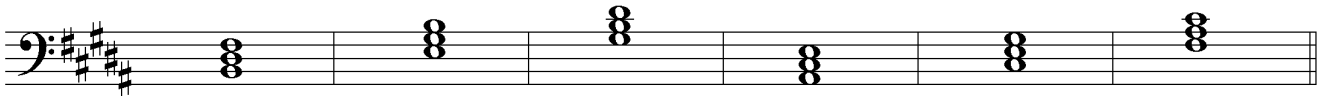
## lesson 17: triads

1. Identify the following as being descriptions of either major, minor, diminished, or augmented triads.

- Outer interval = d5, bottom interval = m3 \_\_\_\_\_
- Outer interval = P5, bottom interval = m3 \_\_\_\_\_
- Outer interval = P5, bottom interval = M3 \_\_\_\_\_
- Outer interval = A5, bottom interval = M3 \_\_\_\_\_



2. Write Roman numerals underneath the following triads from the key of B-major.



3. Draw triads according to the Roman numerals and key. Use a key signature. Watch the clef!

E-minor	B $\flat$ -major	C-major	D-minor	F-minor
V	IV	ii	V	VI

A-major      F#-minor      E-major      B-major      G-minor

iii                      V                      vii                      IV                      ii





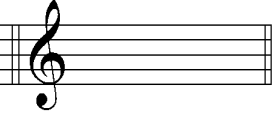



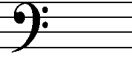
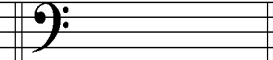


4. Write the Roman numeral for each of the following triads.

- a. A triad based on the second note of a major scale: \_\_\_\_\_
- b. A triad in D-major using these notes: G-B-D: \_\_\_\_\_
- c. A triad in F-minor using these notes: Ab-C-Eb: \_\_\_\_\_
- d. A triad based on the third note of a natural minor scale: \_\_\_\_\_
- e. A triad in B-major using these notes: D#-F#-A#: \_\_\_\_\_
- f. A triad in G-minor using these notes: G-Bb-D: \_\_\_\_\_
- g. A triad based on the sixth note of a major scale: \_\_\_\_\_
- h. A triad in A-major using these notes: A-C#-E: \_\_\_\_\_
- i. A triad in D-minor using these notes: A-C#-E: \_\_\_\_\_
- j. A triad in Ab-major using these notes: F-Ab-C: \_\_\_\_\_

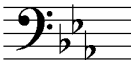
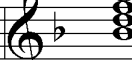
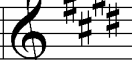
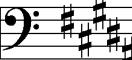
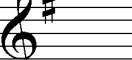

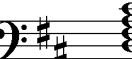
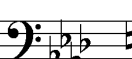
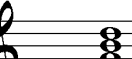



5. Write the key signature and 7th-chords according to the given key and Roman numeral analysis.

C-major	F $\sharp$ -minor	D-minor	F-major	B-major
				
V <sup>7</sup>	i <sup>7</sup>	V <sup>7</sup>	vi <sup>7</sup>	vii <sup>7</sup>
A-minor	D $\flat$ -major	B-minor	E $\flat$ -minor	D-major
				
iii <sup>7</sup>	V <sup>7</sup>	vii <sup>7</sup>	IV <sup>7</sup>	ii <sup>7</sup>

20

6. Analyze the following chords by placing the correct Roman numerals underneath each one.

C-minor	F-major	E-major	B-major	E-minor
				
G-minor	B-minor	F-minor	C-major	F $\sharp$ -major
				

20





# quiz

## lesson 18: octave transposition

1. Transpose the following excerpts up one octave, in the same clef.



2. Transpose the following excerpts up one octave, using the given clef.



3. Transpose the following excerpts down one octave, using the same clef.

Staff 1: Bass clef, 3/4 time signature, key signature of three flats (B-flat, E-flat, A-flat). The melody consists of a quarter note B-flat, a quarter note E-flat, and a quarter note A-flat with a natural sign.

Staff 2: Bass clef, 6/8 time signature, key signature of one sharp (F#). The melody consists of eighth notes F#, G, A, B, C, D, and a dotted quarter note E.

Staff 3: Treble clef, 4/8 time signature, key signature of two flats (B-flat, E-flat). The melody consists of quarter notes G, F, E, D, C, B, and a quarter note A with a natural sign.

Staff 4: Bass clef, common time signature, key signature of two sharps (F#, C#). The melody consists of quarter notes G, A, B, C, D, E, and a quarter note F#.

Staff 5: Treble clef, 6/4 time signature, key signature of three sharps (F#, C#, G#). The melody consists of quarter notes G, A, B, C, D, E, and a half note F#.



4. Transpose the following excerpts down one octave, using the given clef.

Musical staff 1: Treble clef, 2/4 time signature. Notes: quarter rest, quarter G4, quarter F4, quarter E4.

Musical staff 2: Treble clef, 6/8 time signature, key signature of two sharps (F# and C#). Notes: quarter F#4, quarter G4, quarter A4, quarter B4, quarter C#5, quarter D5.

Musical staff 3: Treble clef, 3/4 time signature, key signature of one sharp (F#). Notes: quarter G4, quarter A4, quarter B4, quarter C#5.

Musical staff 4: Bass clef, 3/4 time signature, key signature of two flats (Bb and Eb). Notes: quarter G3, quarter F3, quarter E3, quarter D3, quarter C3, quarter Bb2.

Musical staff 5: Treble clef, common time signature, key signature of three flats (Bb, Eb, and Ab). Notes: quarter G3, quarter F3, quarter E3, quarter D3, quarter C3, quarter Bb2, quarter Ab2, quarter Gb2, quarter Fb2, quarter Eb2, quarter Dbb2.

20

5. For each excerpt:
- Identify the key.
  - Transpose into the given clef, as requested.

Key: \_\_\_\_\_

down 1 8ve

Key: \_\_\_\_\_

down 1 8ve

Key: \_\_\_\_\_

up 1 8ve

Key: \_\_\_\_\_

up 1 8ve

Key: \_\_\_\_\_

up 1 8ve

20



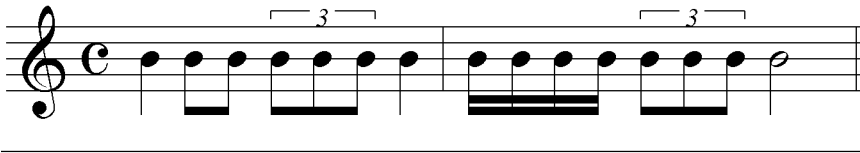


# quiz

## lesson 19: triplets and other tuplets

1. Draw in the basic beat and the breakdown for each of the following simple time excerpts.

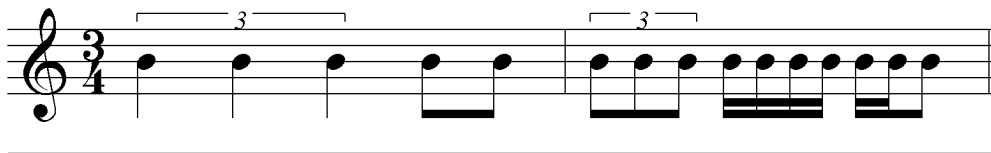
a.



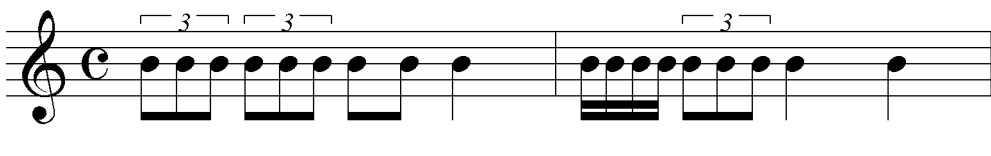
b.



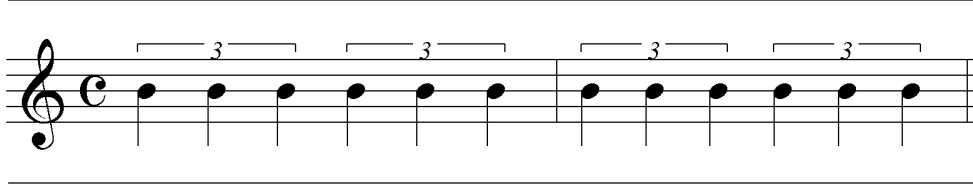
c.



d.



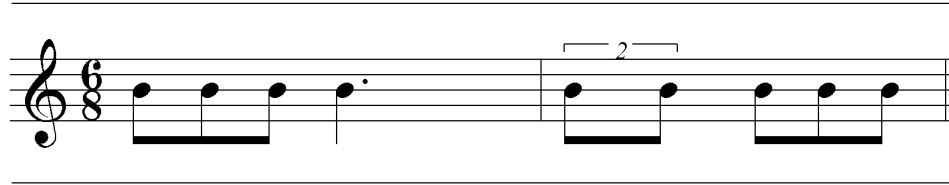
e.



A musical staff in treble clef with a common time signature (C). The staff contains two measures of music. Each measure consists of six eighth notes. The first measure has a bracket above it with the number '3' underneath, indicating a triplet. The second measure also has a bracket above it with the number '3' underneath, indicating a triplet.

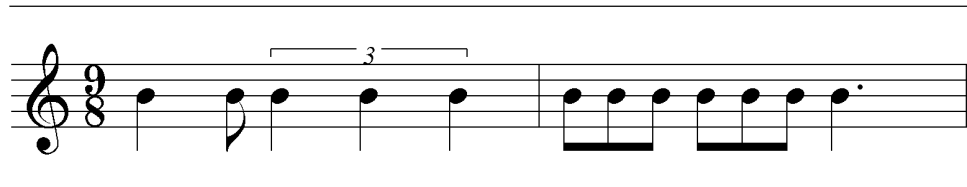
2. Draw in the basic beat and the breakdown for each of the following compound time excerpts.

a.



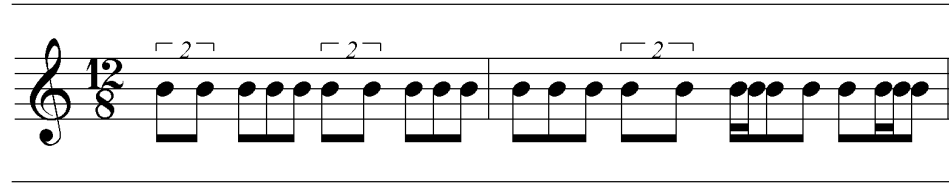
A musical staff in treble clef with a 6/8 time signature. The staff contains two measures of music. The first measure has four eighth notes followed by a dotted quarter note. The second measure has a pair of eighth notes with a bracket above them and the number '2' underneath, followed by another pair of eighth notes with a bracket above them and the number '2' underneath.

b.



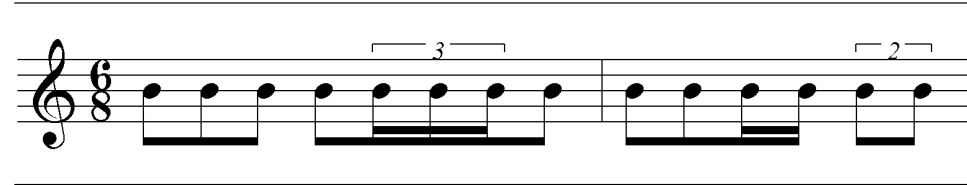
A musical staff in treble clef with a 9/8 time signature. The staff contains two measures of music. The first measure has a quarter note, an eighth note, and a triplet of eighth notes with a bracket above them and the number '3' underneath. The second measure has a triplet of eighth notes with a bracket above them and the number '3' underneath, followed by a dotted quarter note.

c.



A musical staff in treble clef with a 12/8 time signature. The staff contains two measures of music. The first measure has a pair of eighth notes with a bracket above them and the number '2' underneath, followed by another pair of eighth notes with a bracket above them and the number '2' underneath. The second measure has a pair of eighth notes with a bracket above them and the number '2' underneath, followed by a pair of eighth notes with a bracket above them and the number '2' underneath.

d.



A musical staff in treble clef with a 6/8 time signature. The staff contains two measures of music. The first measure has a pair of eighth notes with a bracket above them and the number '3' underneath, followed by another pair of eighth notes with a bracket above them and the number '3' underneath. The second measure has a pair of eighth notes with a bracket above them and the number '2' underneath, followed by another pair of eighth notes with a bracket above them and the number '2' underneath.

e.



3. Complete the following.

a.

The '2' means to play two eighth notes where we would normally see \_\_\_\_ eighth notes.

b.

The '5' means to play five sixteenth notes where we would normally see \_\_\_\_ sixteenth notes.

c.

The '3' means to play three quarter notes where we would normally see \_\_\_\_ quarter notes.

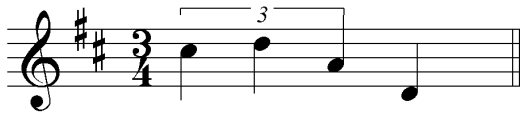
d.

The '2' means to play two eighth notes where we would normally see \_\_\_\_ eighth notes.

e.

The '3' means to play three half notes where we would normally see \_\_\_\_ half notes.

f.



The '3' means to play three quarter notes where we would normally see \_\_\_\_ quarter notes.

g.



The '3' means to play three half notes where we would normally see \_\_\_\_ half notes.

h.



The '5' means to play five sixteenth notes where we would normally see \_\_\_\_ sixteenth notes.

i.



The '3' means to play three half notes where we would normally see \_\_\_\_ half notes.

j.



The '6' means to play sixth eighth notes where we would normally see \_\_\_\_ eighth notes.

30

4. Write the missing triplet/tuplet figures, then the basic beat and breakdown.

a.

b.

c.

d.

e.







# quiz

## lesson 20: key transposition

1. Identify the key of each excerpt. Then transpose them as requested.

a.

Key: \_\_\_\_\_

up to Ab+

b.

Key: \_\_\_\_\_

up to Eb+

c.

Key: \_\_\_\_\_

up to A-

d.

Key: \_\_\_\_\_

e.

Key: \_\_\_\_\_

50

2. Transpose the following melodies according to the specified interval. Do not transpose the key signature.

a.

b.



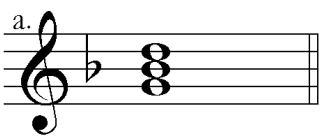


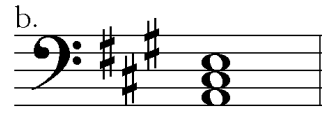


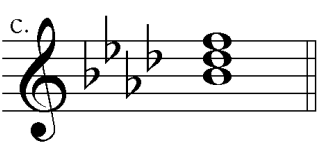
# quiz

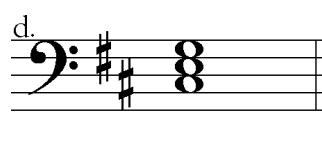
## lesson 21: triad inversions

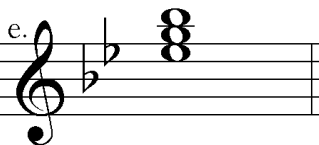
1. Identify the notes of the following triads.

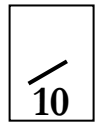
a.  5th \_\_\_\_\_  
3rd \_\_\_\_\_  
root \_\_\_\_\_

b.  5th \_\_\_\_\_  
3rd \_\_\_\_\_  
root \_\_\_\_\_

c.  5th \_\_\_\_\_  
3rd \_\_\_\_\_  
root \_\_\_\_\_

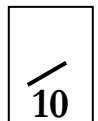
d.  5th \_\_\_\_\_  
3rd \_\_\_\_\_  
root \_\_\_\_\_

e.  5th \_\_\_\_\_  
3rd \_\_\_\_\_  
root \_\_\_\_\_



2. Fill in the blanks.

- $\overset{6}{4}$  indicates a triad in \_\_\_\_\_ inversion.
- A triad in second inversion has the \_\_\_\_\_ (root, third, fifth) on the bottom.
- A triad in root position has the \_\_\_\_\_ (root, third, fifth) on the bottom.
- $\overset{6}{4}$  indicates a triad in \_\_\_\_\_ inversion.
- A triad in first inversion has the \_\_\_\_\_ (root, third, fifth) on the bottom.



3. Analyze the following triads, placing the correct Roman numerals underneath. (Take note of the key when analyzing.)

Key: D-

a. b.  c.  d.

\_\_\_\_\_

e. f.  g.  h.

\_\_\_\_\_

i. j.  k.  l.

\_\_\_\_\_

m. n.  o.  p.

\_\_\_\_\_

\_\_\_\_\_

4. Write the following triads in the specified inversion.

a.  $F^+$   $IV^6$       b.  $B^-$   $III^6$       c.  $G^+$   $ii^6$       d.  $C^-$   $i^6$

e.  $E^+$   $IV^6_4$       f.  $G^-$   $ii^6_4$       g.  $Eb^+$   $vi^6_4$       h.  $F^-$   $V^6$

$Ab^+$   $V^6$        $Bb^-$   $ii^6$        $C^+$   $iii^6_4$        $D^-$   $VI^6$

$C\#^-$   $VI^6_4$        $Eb^+$   $V^6$        $D^+$   $I^6$        $G^-$   $iv^6_4$

$B^+$   $IV$        $B^-$   $iv^6$        $Bb^+$   $V^6$        $F^-$   $i^6_4$

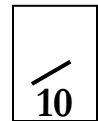




# q u i z

## lesson 22: cadences

1. a. A chord progression of V to I, in which both chords are in root position, and the top *voice* (i.e., *note*) ends on the tonic note, is a \_\_\_\_\_ cadence.
- b. An authentic cadence in which one of the chords is in inversion, is called a(n) \_\_\_\_\_ authentic cadence.
- c. A cadence that features the chords IV to I is called a(n) \_\_\_\_\_ cadence.
- d. A cadence in which the chord progression moves from a I chord to a V chord is called a(n) \_\_\_\_\_ cadence.
- e. A cadence in which the V chord moves to a chord other than I is called a(n) \_\_\_\_\_ cadence.



2. Identify the following cadences by:
  - a. writing the Roman numeral analysis under each chord (1 point each); and
  - b. writing the cadence type (PAC, IAC, HC, PC) under each analysis (3 points each).

\_\_\_\_\_

\_\_\_\_\_

e. D+      f. C-      g. Ab+      h. Bb-

\_\_\_\_\_

\_\_\_\_\_

i. C+      j. B-      k. E+      l. A-

\_\_\_\_\_

\_\_\_\_\_

m. G+      n. C#-      o. B+

\_\_\_\_\_

\_\_\_\_\_

45

3. Write the following cadences as requested.

a.  $Bb+$       b.  $F\#-$       c.  $G+$       d.  $G-$

IAC

PAC

IAC

PC

e.  $D+$       f.  $A-$       g.  $F+$       h.  $F-$

HC

HC

PAC

IAC

i.  $B-$       j.  $C+$       k.  $D-$       l.  $Ab+$

PAC

PC

HC

IAC

m.  $Eb+$       n.  $F\#-$       o.  $F\#+$

PAC

PC

HC

45





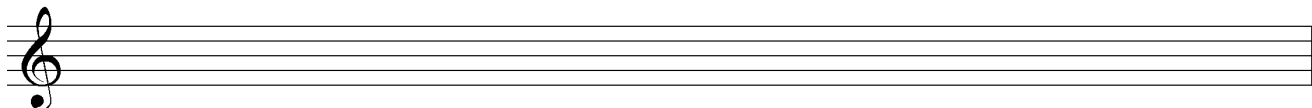
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# quiz

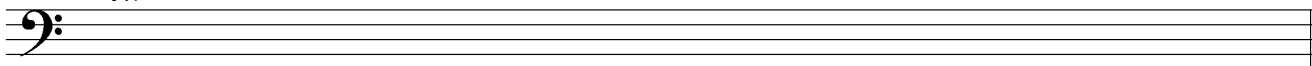
## lesson 23: modes

1. Write the following modal scales, ascending, using a key signature.

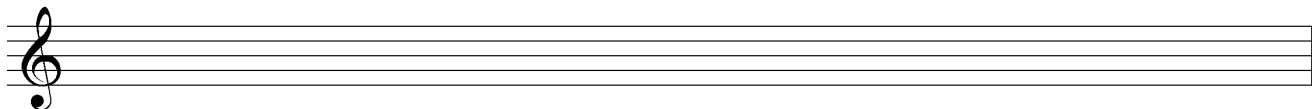
a. G Dorian



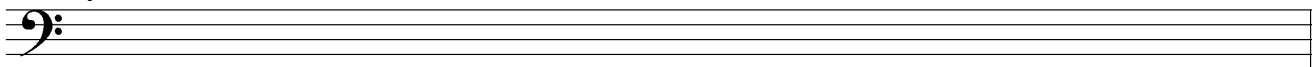
b. F Phrygian



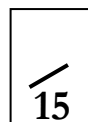
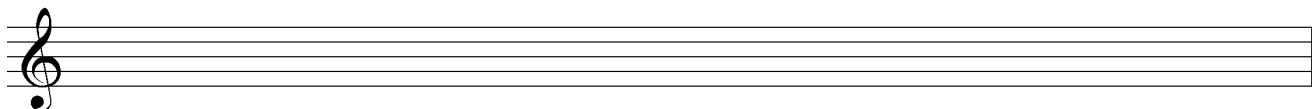
c. F# Mixolydian



d. C Lydian

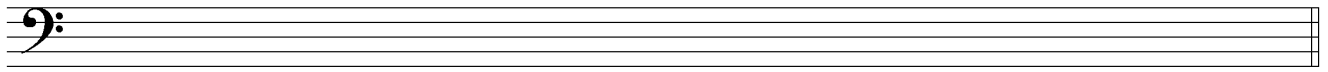


e. Bb Dorian

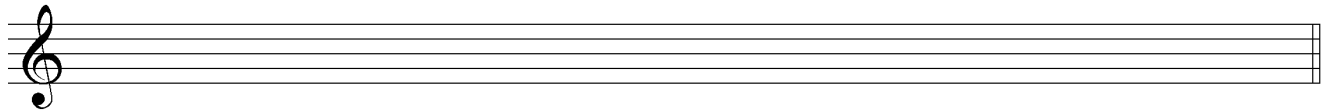


2. Write the following modal scales, ascending and descending, using a key signature.

a. E Dorian



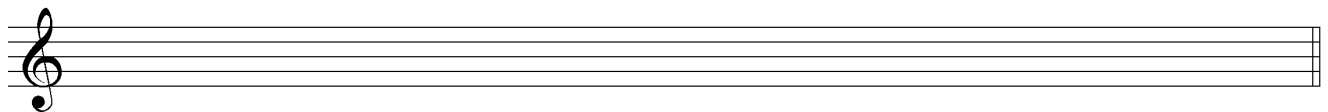
b. G Aeolian



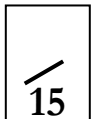
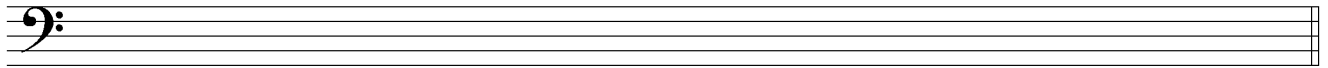
c. A Locrian



d. Eb Ionian



e. C# Phrygian



3. Identify the modes of the following excerpts by filling in the blank with the correct mode.

a. Mode: \_\_\_\_\_



b. Mode: \_\_\_\_\_



c. Mode: \_\_\_\_\_



d. Mode: \_\_\_\_\_



e. Mode: \_\_\_\_\_



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4. Fill in the blanks with the name of a mode:

- A mode starting on G, using three flats, is a(n) \_\_\_\_\_ scale.
- A mode starting on C#, using six sharps, is a(n) \_\_\_\_\_ scale.
- A mode starting on C, using one sharp, is a(n) \_\_\_\_\_ scale.
- A mode starting on D, using one flat, is a(n) \_\_\_\_\_ scale.
- A mode starting on A, using four sharps, is a(n) \_\_\_\_\_ scale.

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5. Identify the mode of each of the following excerpts.

a. Mode: \_\_\_\_\_



b.

Mode: \_\_\_\_\_



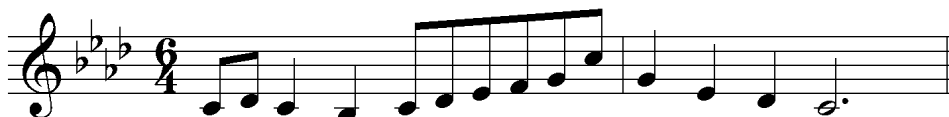
c.

Mode: \_\_\_\_\_



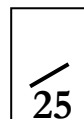
d.

Mode: \_\_\_\_\_



e.

Mode: \_\_\_\_\_





# quiz

## lesson 24: other clefs

1. Name the clef.

- D on the middle line: \_\_\_\_\_.
- C on the middle line: \_\_\_\_\_.
- Middle C in the 3<sup>rd</sup> space: \_\_\_\_\_.
- Middle C on the 4<sup>th</sup> line: \_\_\_\_\_.
- E on the bottom line: \_\_\_\_\_ and \_\_\_\_\_.
- G on the top line: \_\_\_\_\_.
- F on the 4<sup>th</sup> line: \_\_\_\_\_.
- G in the 4<sup>th</sup> space: \_\_\_\_\_.
- G in the 2<sup>nd</sup> line: \_\_\_\_\_.
- G in the 1<sup>st</sup> space: \_\_\_\_\_.

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2. Write the note names under each note. Watch the clef!

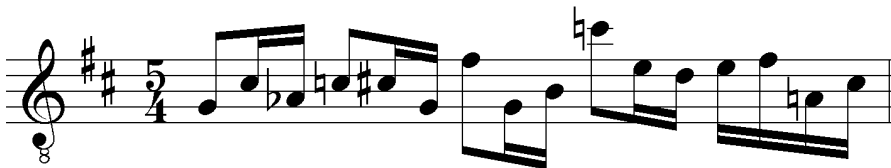
a.



b.



c.



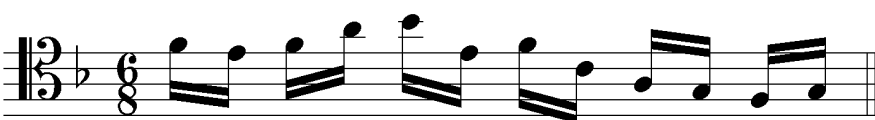
d.



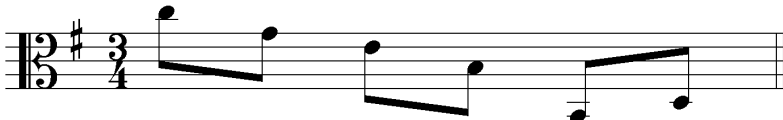
e.



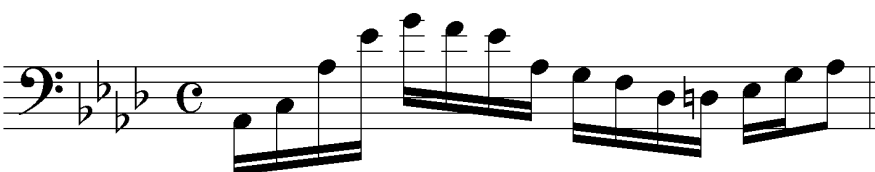
f.



g.



h.



i.



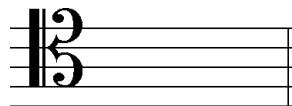
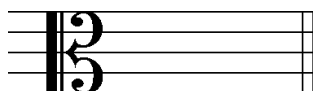
j.



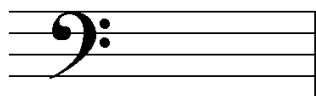
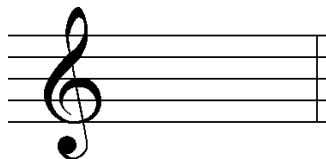
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3. For each note given, write the same pitch in the requested clefs:

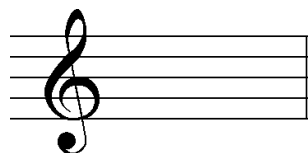
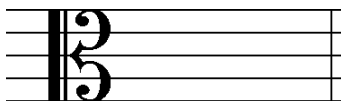
a.



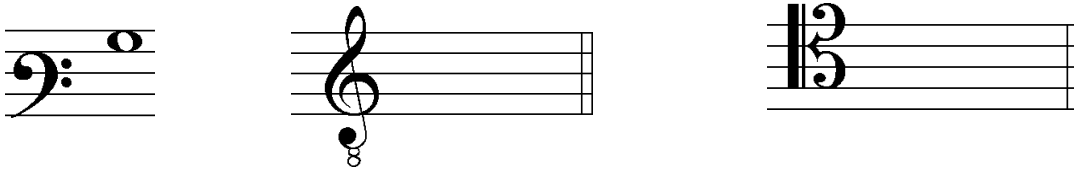
b.



c.

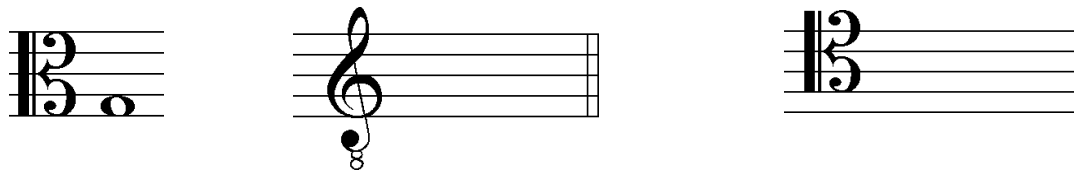


d.



Three empty musical staves are shown. The first staff has a bass clef, the second has a treble clef, and the third has an alto clef.

e.

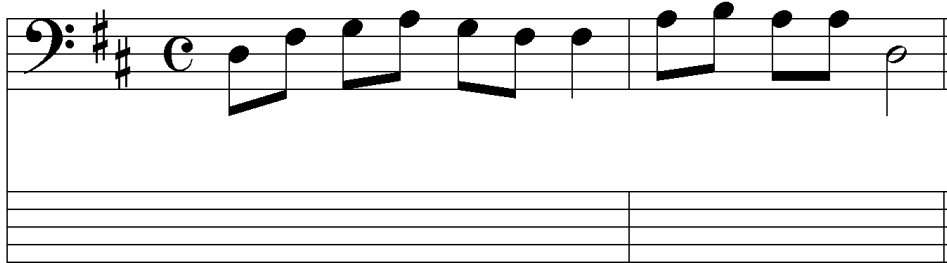


Three empty musical staves are shown. The first staff has an alto clef, the second has a treble clef, and the third has a bass clef.

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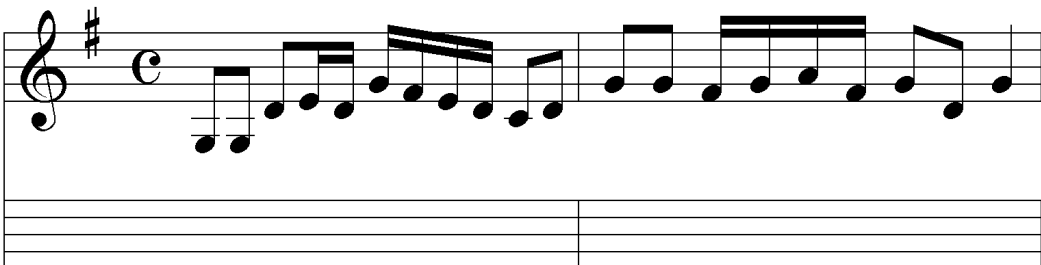
4. Transcribe each short melody into the clef requested, without transposing.

a. Into the vocal tenor clef:



Musical notation for exercise 4a. The first staff shows a melody in bass clef with a key signature of one sharp (F#) and a common time signature (C). The melody consists of quarter and eighth notes. Below the staff are two empty staves for transcription.

b. Into the alto clef:



Musical notation for exercise 4b. The first staff shows a melody in treble clef with a key signature of one sharp (F#) and a common time signature (C). The melody consists of quarter and eighth notes. Below the staff are two empty staves for transcription.

c. Into the tenor clef:

Musical notation for exercise c. The staff is in tenor clef (C4), 6/8 time signature, and one flat (B-flat). The melody consists of a dotted quarter note followed by an eighth note, then a series of eighth notes, and finally a quarter note. Below the staff are two empty staves for accompaniment.

d. Into the bass clef:

Musical notation for exercise d. The staff is in bass clef, 3/4 time signature, and three flats (B-flat, E-flat, A-flat). The melody consists of a series of eighth notes, followed by a quarter note, and then a series of eighth notes. Below the staff are two empty staves for accompaniment.

e. Into the alto clef:

Musical notation for exercise e. The staff is in alto clef (C4), 6/4 time signature, and three flats (B-flat, E-flat, A-flat). The melody consists of a series of eighth notes, followed by a quarter note, and then a series of eighth notes. Below the staff are two empty staves for accompaniment.

f. Into the bass clef:

Musical notation for exercise f. The staff is in bass clef, common time (C), and one flat (B-flat). The melody consists of a series of eighth notes, followed by a quarter note, and then a series of eighth notes. Below the staff are two empty staves for accompaniment.

g. Into the bass clef:

Musical notation for exercise g. It features a single staff with a bass clef, a key signature of two flats (Bb and Eb), and a common time signature (C). The melody consists of two measures. The first measure contains a quarter note G2, a quarter note Ab2, and a quarter note Bb2, with a slur and a '3' above indicating a triplet. The second measure contains a quarter note C3, a quarter note D3, and a quarter note Eb3, also with a slur and a '3' above indicating a triplet. Below the staff are two empty staves for practice.

h. Into the vocal tenor clef:

Musical notation for exercise h. It features a single staff with a vocal tenor clef (C4), a key signature of one flat (Bb), and a common time signature (C). The melody is a continuous eighth-note sequence: G3, Ab3, Bb3, C4, D4, Eb4, F4, G4, Ab4, Bb4, C5, Bb4, Ab4, G4, F4, Eb4, D4, C4. Below the staff are two empty staves for practice.

i. Into the treble clef:

Musical notation for exercise i. It features a single staff with a treble clef, a key signature of two sharps (F# and C#), and a 3/4 time signature. The melody consists of two measures. The first measure contains a quarter note G4, a quarter note Ab4, and a quarter note Bb4. The second measure contains a quarter note C5, a quarter note D5, and a quarter note Eb5. Below the staff are two empty staves for practice.

j. Into the bass clef:

Musical notation for exercise j. It features a single staff with a bass clef, a key signature of two sharps (F# and C#), and a common time signature (C). The melody consists of two measures. The first measure contains a quarter note G2, a quarter note Ab2, and a quarter note Bb2. The second measure contains a quarter note C3, a quarter note D3, and a quarter note Eb3. Below the staff are two empty staves for practice.

5. Transcribe and transpose each melody from Question 4 as requested below:

a. Into the tenor (C) clef, up a major second:

Musical notation for exercise a: A melody in bass clef with a key signature of one sharp (F#) and a common time signature (C). The melody consists of quarter notes: G2, A2, B2, C3, D3, E3, F#3, G3, A3, B3, C4. Below the staff are two empty staves for transcription.

b. Into the bass clef, down a major third:

Musical notation for exercise b: A melody in treble clef with a key signature of one sharp (F#) and a common time signature (C). The melody consists of eighth notes: G4, A4, B4, C5, D5, E5, F#5, G5, A5, B5, C6. Below the staff are two empty staves for transcription.

c. Into the treble clef, up an octave:

Musical notation for exercise c: A melody in bass clef with a key signature of one flat (Bb) and a 6/8 time signature. The melody consists of quarter notes: G2, A2, B2, C3, D3, E3, F#3, G3, A3, B3, C4. Below the staff are two empty staves for transcription.

d. Into the treble clef, up a major seventh:

Musical notation for exercise d: A melody in bass clef with a key signature of two flats (Bb, Eb) and a 3/4 time signature. The melody consists of eighth notes: G2, A2, B2, C3, D3, E3, F#3, G3, A3, B3, C4. Below the staff are two empty staves for transcription.

e. Into the alto clef, down a minor second:

f. Into the treble clef, up a minor seventh:

g. Into the bass clef, down a perfect fourth:

h. Into the vocal tenor clef, up a diminished fifth:

i. Into the tenor clef, up a minor third:

Musical notation for exercise i. The top staff is a tenor clef (C4 on the second line) in 3/4 time. The melody consists of the following notes: G4 (quarter), F4 (quarter), E4 (quarter), D4 (quarter), C4 (quarter), B3 (quarter), A3 (quarter), G3 (quarter), F3 (quarter), E3 (quarter), D3 (quarter), C3 (quarter). The bottom two staves are empty.

j. Into the bass clef, down a minor sixth:

Musical notation for exercise j. The top staff is a bass clef (C3 on the second line) in 3/4 time with a key signature of two sharps (F# and C#). The melody consists of the following notes: F#4 (quarter), E4 (quarter), D4 (quarter), C4 (quarter), B3 (quarter), A3 (quarter), G3 (quarter), F3 (quarter), E3 (quarter), D3 (quarter), C3 (quarter), B2 (quarter), A2 (quarter), G2 (quarter), F2 (quarter), E2 (quarter), D2 (quarter), C2 (quarter). The bottom two staves are empty.

30





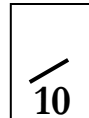
# quiz

## lesson 25: score formats

1. Fill in the blanks

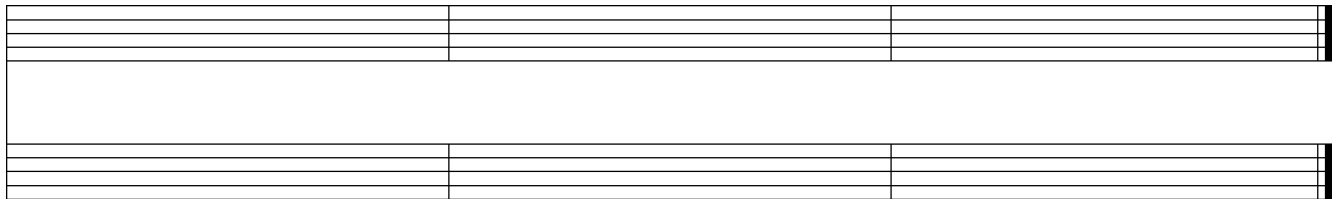
a. Another word for *open* score is \_\_\_\_\_ score.

b. Two other words for *close* score: \_\_\_\_\_ score, or  
\_\_\_\_\_ score.



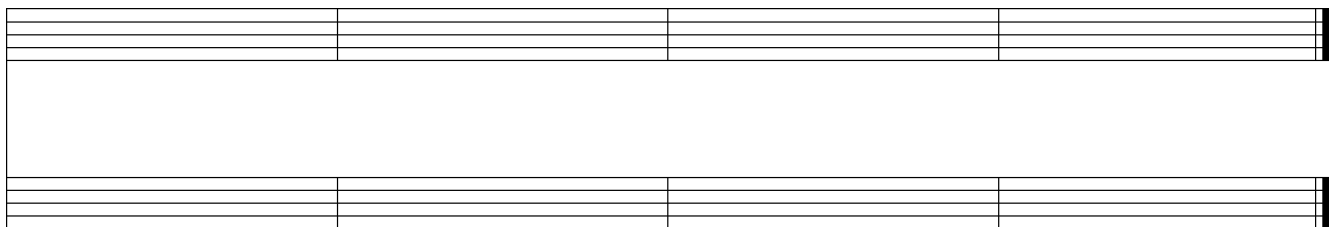
2.

a. Rewrite the following open score into close score format. Use two staves, one treble, one bass. Place the violin parts in the treble staff, and the viola and cello in the bass staff.



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b. Rewrite the following into close score format. Use two staves, one treble, one bass. Place the flute and oboe part in the treble staff, and the other instruments in the bass staff.



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3. Rewrite the following close score into open score format for string quartet.

The image shows a musical score in 6/8 time, consisting of two staves. The top staff is in treble clef and contains a series of chords and dyads, some with slurs. The bottom staff is in bass clef and contains a melodic line of eighth notes. The key signature has two flats (B-flat and E-flat).

Four sets of empty five-line musical staves, each consisting of two staves, provided for the student to rewrite the close score into an open score for string quartet.

4. Rewrite the following full choir score into close score format. Include the lyrics.

74

S

But the peo - ple love life there,

74

A

Grand Riv - er peo - ple love life there so

74

T

8

Grand Ri - ver peo - ple love life there so

74

B

Grand Ri - ver ah