MUSIC THEORY

INSTRUCTOR'S GUIDE

LEVEL 7

MUSIC AND ARTS MINISTRIES
CANADA AND BERMUDA

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Review of Level 6

Augmented intervals are major or perfect intervals that are made larger by a semitone.

Diminished intervals are minor or perfect intervals that are made smaller by a semitone.

3 Types of minor scales:

Natural is formed by taking the third, sixth, and seventh notes of the major scale and lowering them by a semitone.

Harmonic is formed by raising the seventh note of the natural minor scale by a semitone.

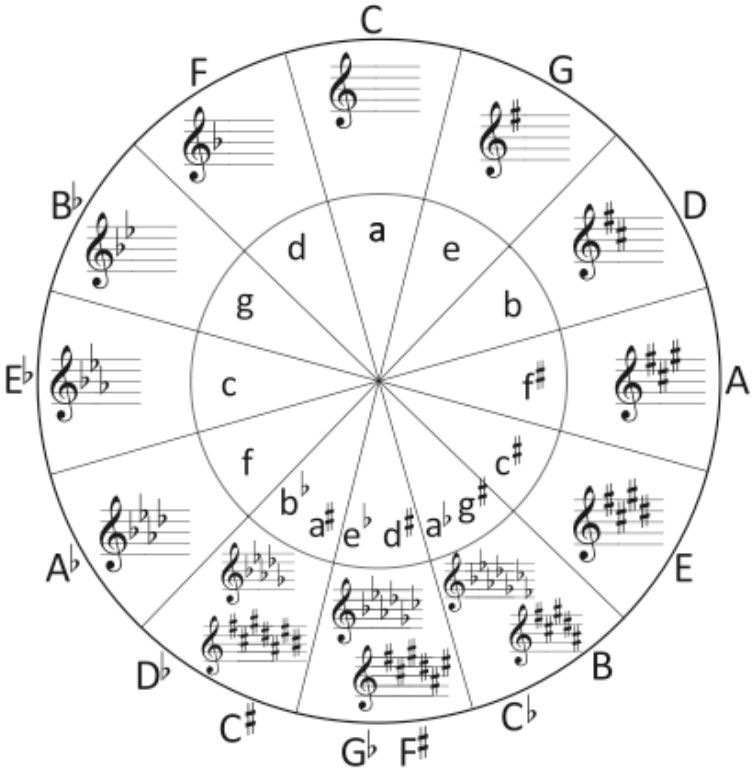
Melodic is formed by raising the sixth and seventh notes by a semitone on the way up, then lowering them (to form a natural minor scale) on the way down.

To find the relative minor key of a major key, move down *three* semitones.

The order of sharps: **Father Charles Goes Down And Ends Battle**

The order of flats: **Battle Ends And Down Goes Charles' Father**

The **Circle of Fifths**:



A **double sharp** is a sharp note raised by *another semitone*.

A **double flat** is a flat note lowered by *another semitone*.

The 4/4 time signature is often called *common time*, sometimes represented with 𝐂.

The 2/2 time signature is called *cut time*, sometimes represented with 𝐂.

Cut time has two half note values per bar. It has the same rhythm as a 4/4 bar but is counted differently (in two).

When counting beats:

Use “1 e + a” for beats subdivided into four parts.

Use “1 + a” for beats subdivided into three parts.

A musical **phrase** is a series of notes within a larger framework of the piece. They are marked by curved lines over top of the notes.

Lesson 7.1 – Augmented and Diminished Triads

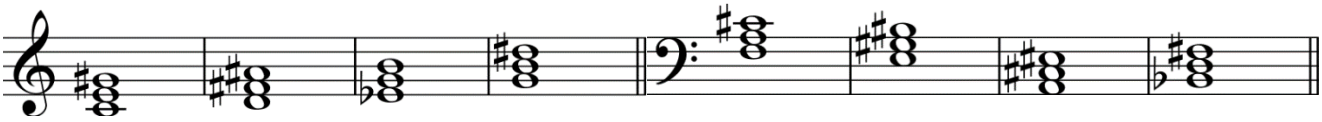
Recall that a triad consists of a root, a 3rd (above the root) and a 5th (above the root).

A **major** triad is built with a **major 3rd** and a **perfect 5th** above the root. A **minor** triad is built with a **minor 3rd** and a **perfect 5th** above the root.

Two additional types of triads are the **augmented** triad and the **diminished** triad.

An **augmented triad** consists of a **major 3rd** and an **augmented 5th above the root**. We use the abbreviation **aug** for augmented triads.

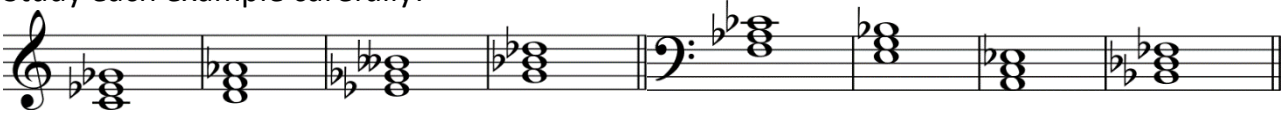
Study each example carefully:



NOTE: You can also think of the augmented triad as having two major thirds, built one on top of another.

A **diminished triad** consists of a **minor 3rd** and a **diminished 5th above the root**. We use the abbreviation **dim** for diminished triads.

Study each example carefully:

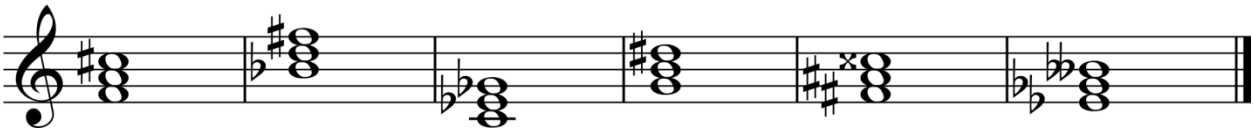


NOTE: You can also think of the diminished triad as having two minor thirds, built one on top of another.

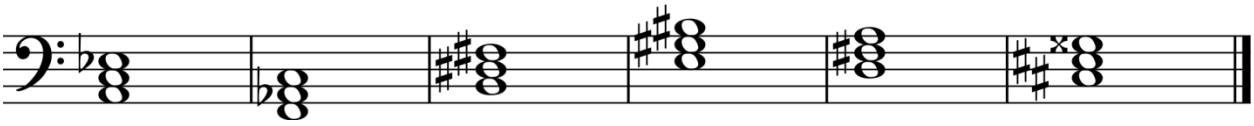
Additional note: In some instances, you will see **X** or **+** written to identify **augmented** triads, and **D** or **o** written to identify **diminished** triads. While either is acceptable, they are used sparingly when writing chords in lead sheets (introduced in Level 8).

EXERCISE

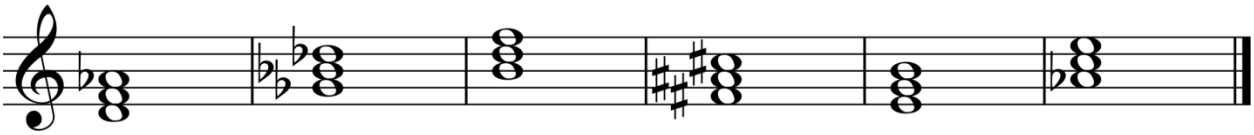
1. Name the following triads. The first one is done for you.



Faug _Bbaug_ _Cdim_ _Gaug_ _F#aug_ _Ebdim_

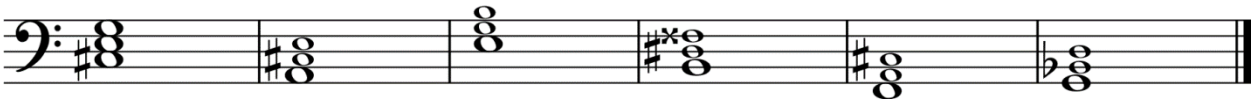


Adim _Fm_ _B_ _Eaug_ _D_ _C#aug_

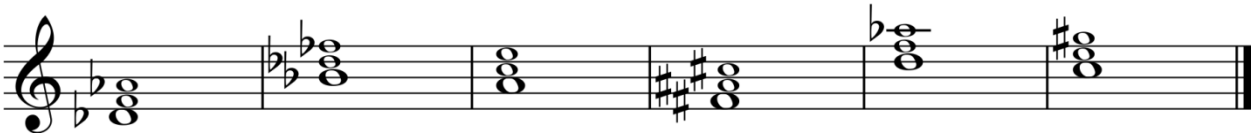


Ddim _Gb_ _Bdim_ _F#_ _Em_ _Abaug_

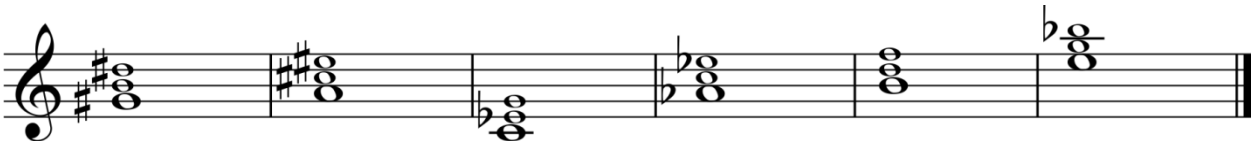
2. Write the triad above the given note. The first one is done for you.



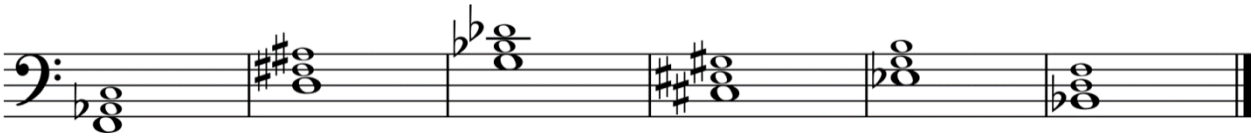
C#dim A Em Baug Faug Gm



Db Bbdim Am F# Ddim Caug



G#m Aaug Cm Ab Bdim Edim



Fm Daug Gdim C# Ebaug Bb

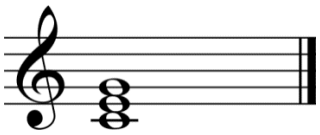
SUMMARY

- ✓ An augmented triad consists of a major 3rd and an augmented 5th above the root.
- ✓ An augmented triad is labelled **aug**.
- ✓ A diminished triad consists of a minor 3rd and a diminished 5th above the root.
- ✓ A diminished triad is labelled **dim**.

Lesson 7.2 – Triads in Inversion

When we play triads, they can have similar sounds, even if the notes are in a different order than the original (e.g., some of the notes switch octaves). When a triad is in its "original" position with the root note on the bottom of the triad, we call this **root position.** See the example below:

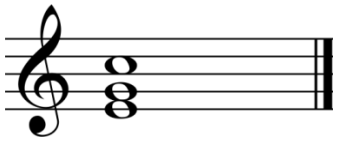
C Root



When we switch the order of the notes, the triad is said to be in **inversion**.

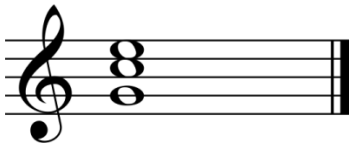
If we move the root up an octave, the 3rd is now on the bottom of the triad. This is called **1st inversion**. Study the example below:

C 1st



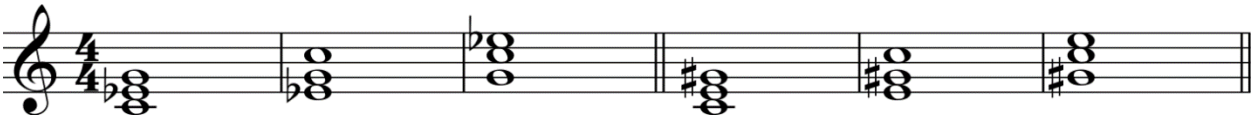
If we move the root and the 3rd up an octave, the 5th is on the bottom of the triad. This is called **2nd inversion**. Study the example below:

C 2nd



When we play a triad in inversion, it does not change the root or type (maj, min, aug, dim) of the chord. The name of the triad is still based on the root note.

The same principles about inversions apply to **all types** of triads**.**

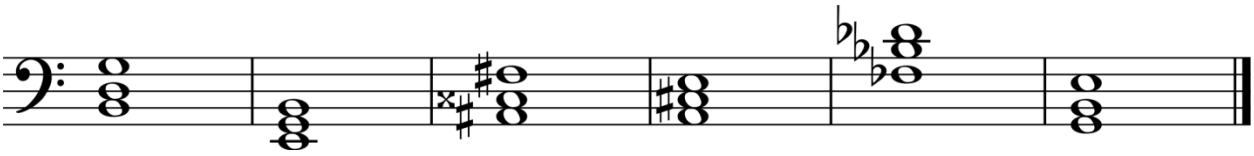


Cm root Cm 1st inversion Cm 2nd inversion Caug root Caug 1st Caug 2nd

Sometimes on piano and guitar it is useful to **not** play in root position all the time because it makes transitions between different notes much easier. It means there are not as many large jumps between different triads.

EXERCISE

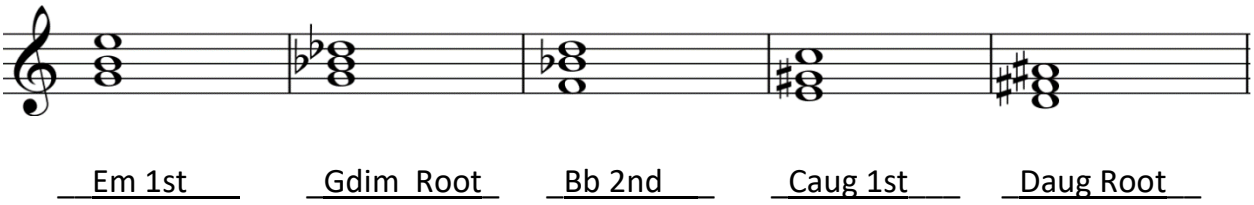
1. Label the position of the following chords (Root, 1st, 2nd). The first one is done for you.



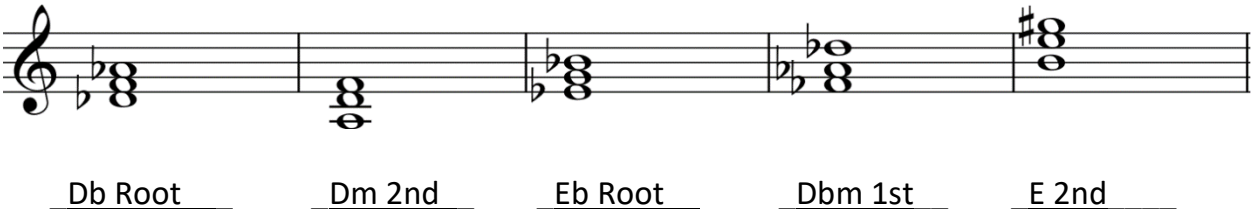
1st Root 1st Root 2nd 1st

2. Name the following triads. Include the type of triad and its position (Root, 1st, 2nd). The first one is done for you.

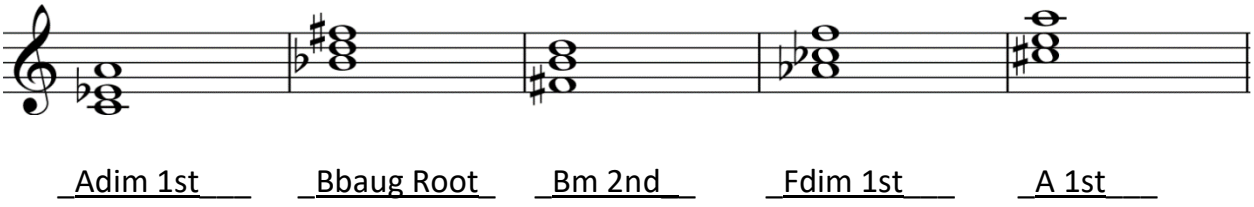
Remember: You must think about the triad in root position first, *then* change the order of the notes.



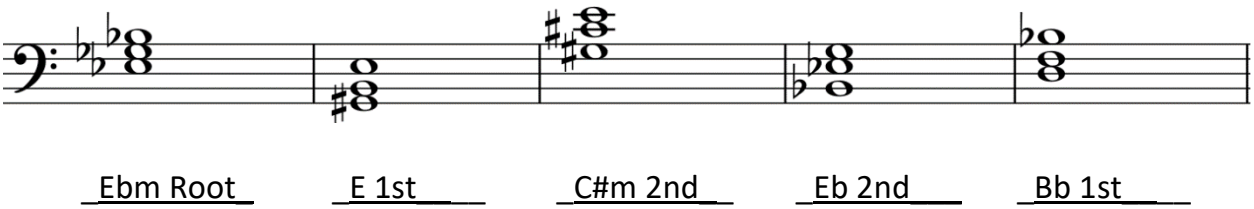
Em 1st Gdim Root Bb 2nd Caug 1st Daug Root



Db Root Dm 2nd Eb Root Dbm 1st E 2nd

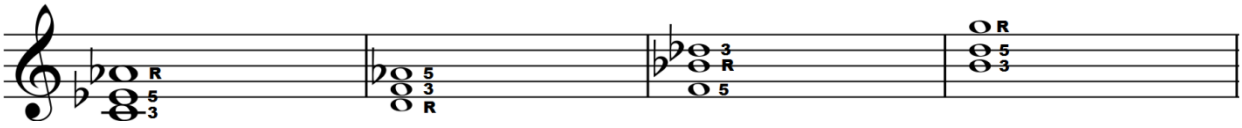


Adim 1st Bbaug Root Bm 2nd Fdim 1st A 1st

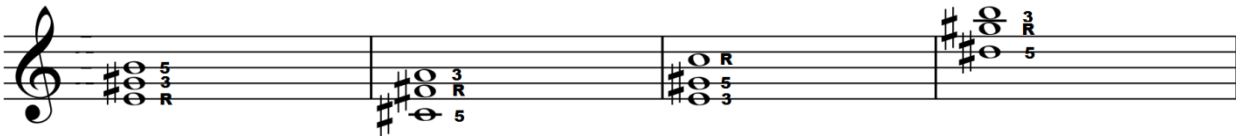


Ebm Root E 1st C#m 2nd Eb 2nd Bb 1st

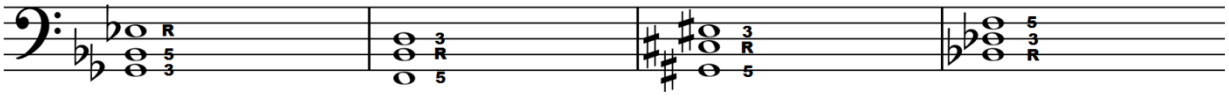
3. Write the following triads. Label the root, 3rd, and 5th. The first one is done for you.



Ab 1st | Ddim Root | Bbm 2nd | G 1st



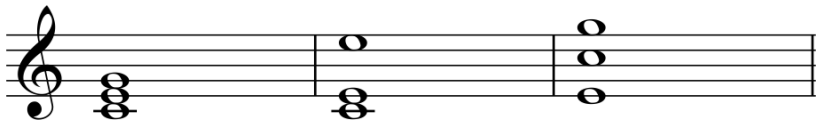
E Root | F#m 2nd | Caug 1st | G#m 2nd



Ebm 1st | Bdim 2nd | C# 2nd | Bbm Root

Open and Closed Triads

The notes of a triad can either be as close together as possible (as we have looked at so far) OR they can be spread out. If they are as close together as possible, the triad is said to be in **closed position.** If they are more spread, out the triad is said to be in **open position**.

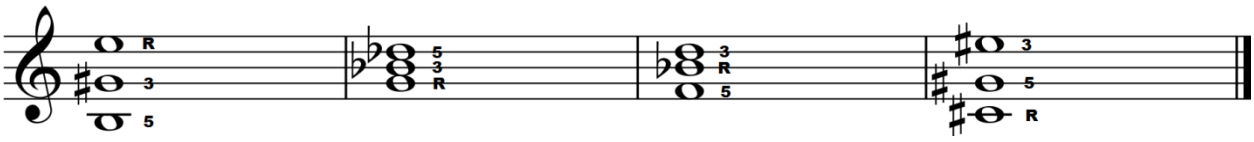


C Closed | C Open | C 1st Open

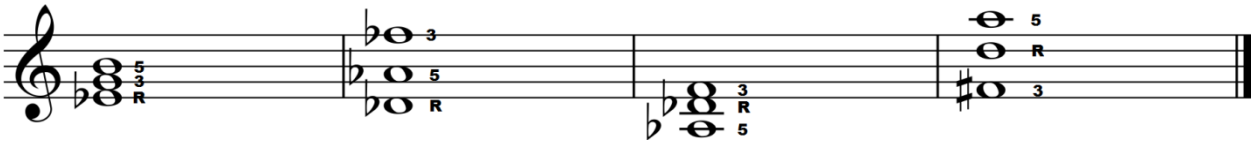
NOTE: The total span of a closed triad is a 5th or a 6th. The total span of an open triad is usually a 10th or an 11th (greater than an octave).

EXERCISE

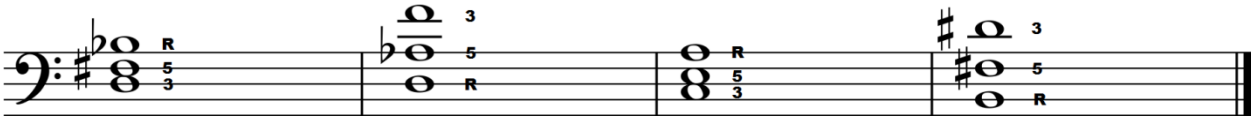
Label the following triads by type, position (open or closed) and label the notes of each triad (Root, 3rd and 5th). The first one is done for you.



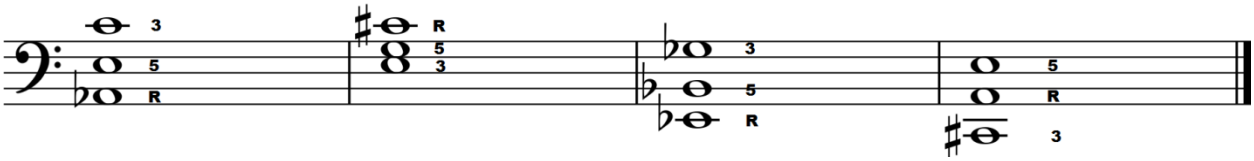
E Open | Gdim Closed | Bb Closed | C# Open



Ebaug Closed | Dbm Open | Db Closed | D Open



Bbaug Closed | Ddim Open | Am Closed | B Open



Abaug Open | C#dim Closed | Ebm Open | A Open

SUMMARY

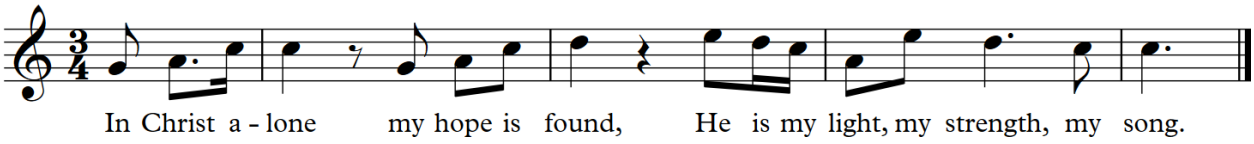
- ✓ Triads can be in **root position** (root is the bottom note), 1st inversion (3rd is the bottom note) or 2nd inversion (5th is the bottom note).
- ✓ Triads can be in **closed position** (notes as close together as possible) or **open position** (more spread out).

Lesson 7.3 – Basic Transposition by Interval

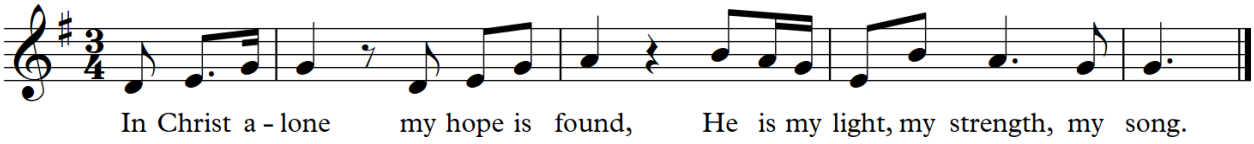
It often happens that we need to change a piece of music from being in one key to being in another key. When we do this, it is called **transposition**. When we **transpose** a piece of music, we move **all of the notes** up or down by a certain interval so that the piece is now in a **new key**.

Let's see a simple example of how transposition works.

In Christ Alone *in C major*



In Christ Alone *in G major*



Since we are transposing from C major **down** to G major, we notice that the interval from **C** down to **G** is a Perfect 4th. Therefore, we transpose **every note** from the first key (*C major*) **down a Perfect 4th** so it is now in ***G*** *major*. Then, add the key signature of G major.

Follow these steps:

1. Identify the old key you are transposing from and the new key you are transposing to.

2. Find the interval between the two keys.

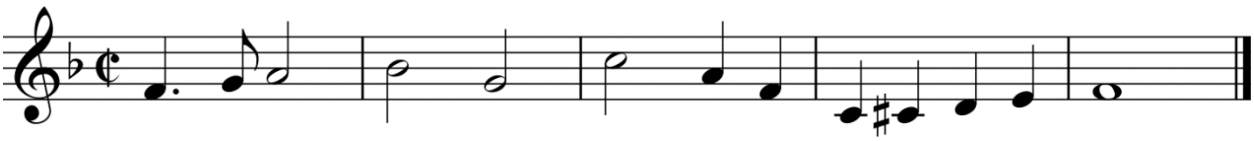
3. Transpose every note from the old key up or down the same interval as is between the keys.

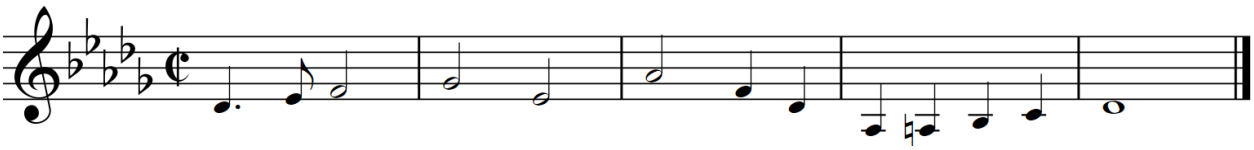
EXERCISE

1) Try transposing this piece from F major **down** to Db major.

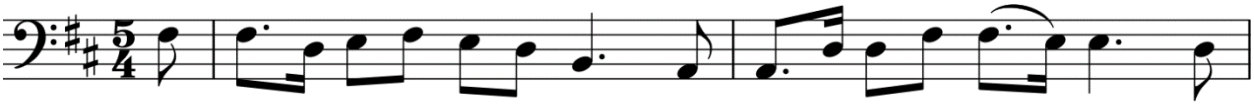
What is the interval between **F** and **Db**? __major__ _3rd__

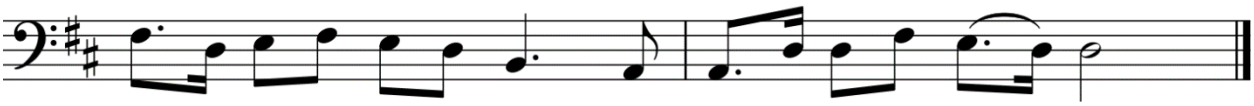
This means we must transpose every note from the piece in F major down a _major_ _3rd_ in order to put it into Db major.

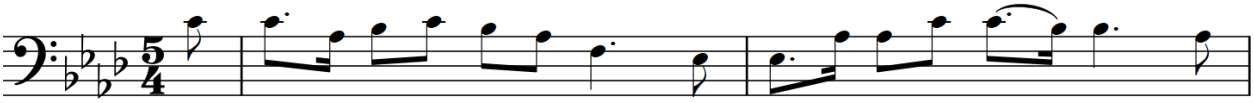


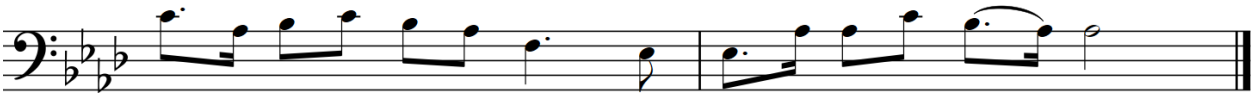


2) Try transposing the following piece – *How Deep the Father's Love for Us* – from D major **up** to Ab major.

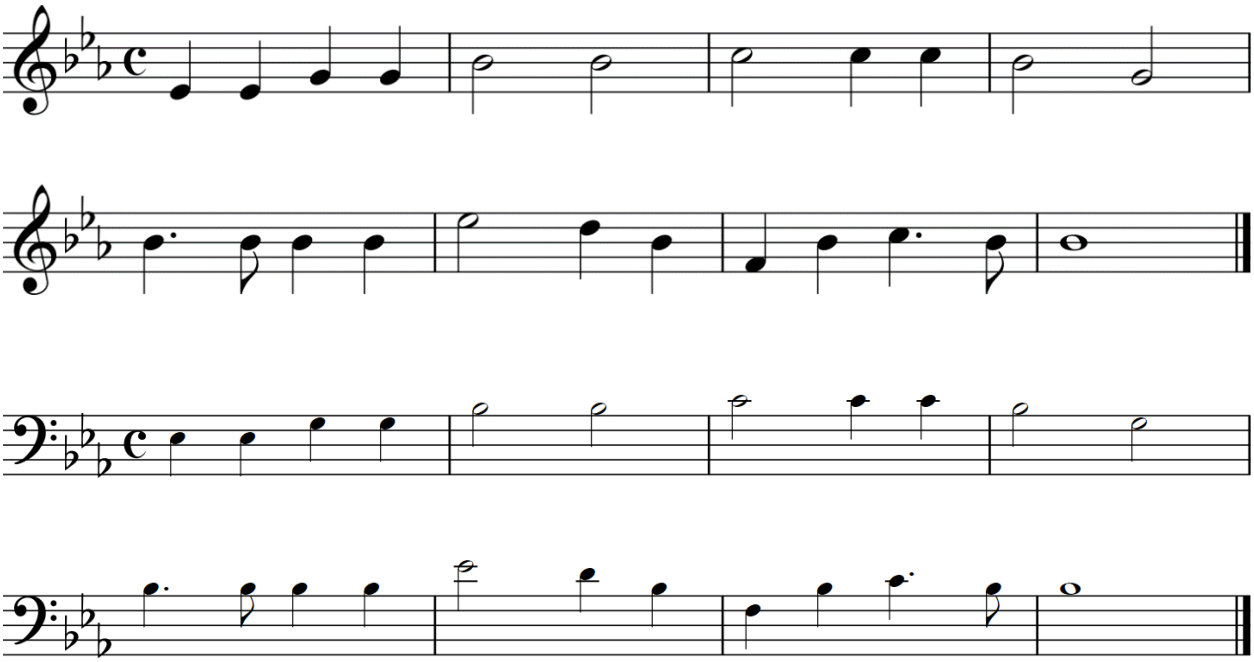




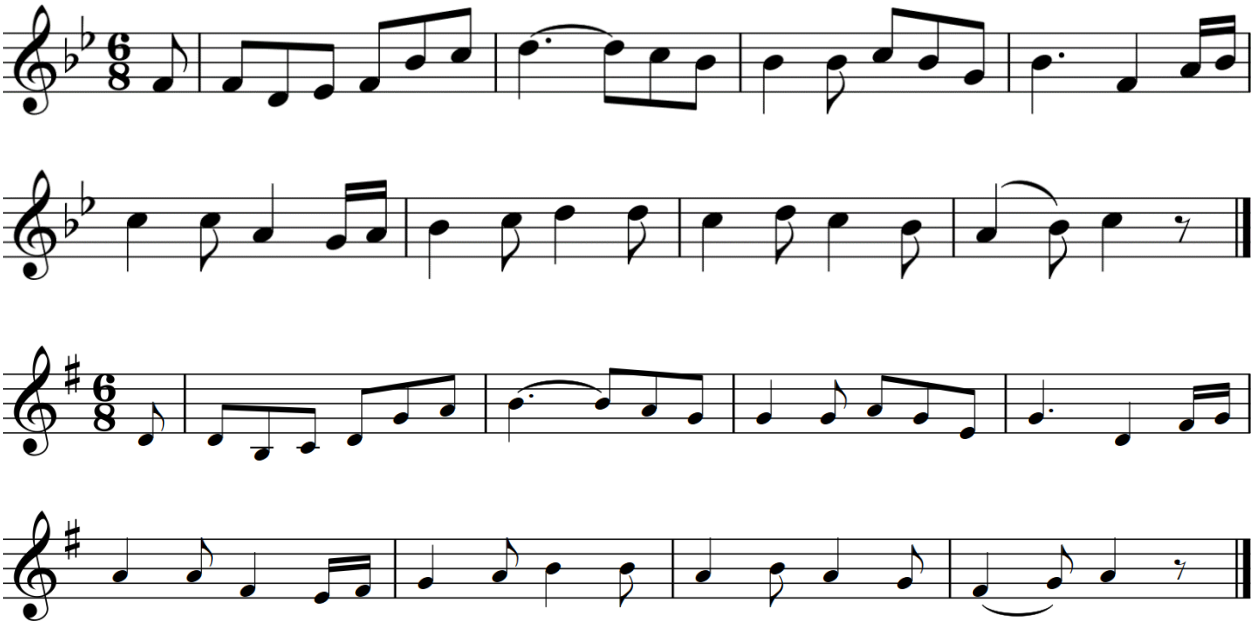




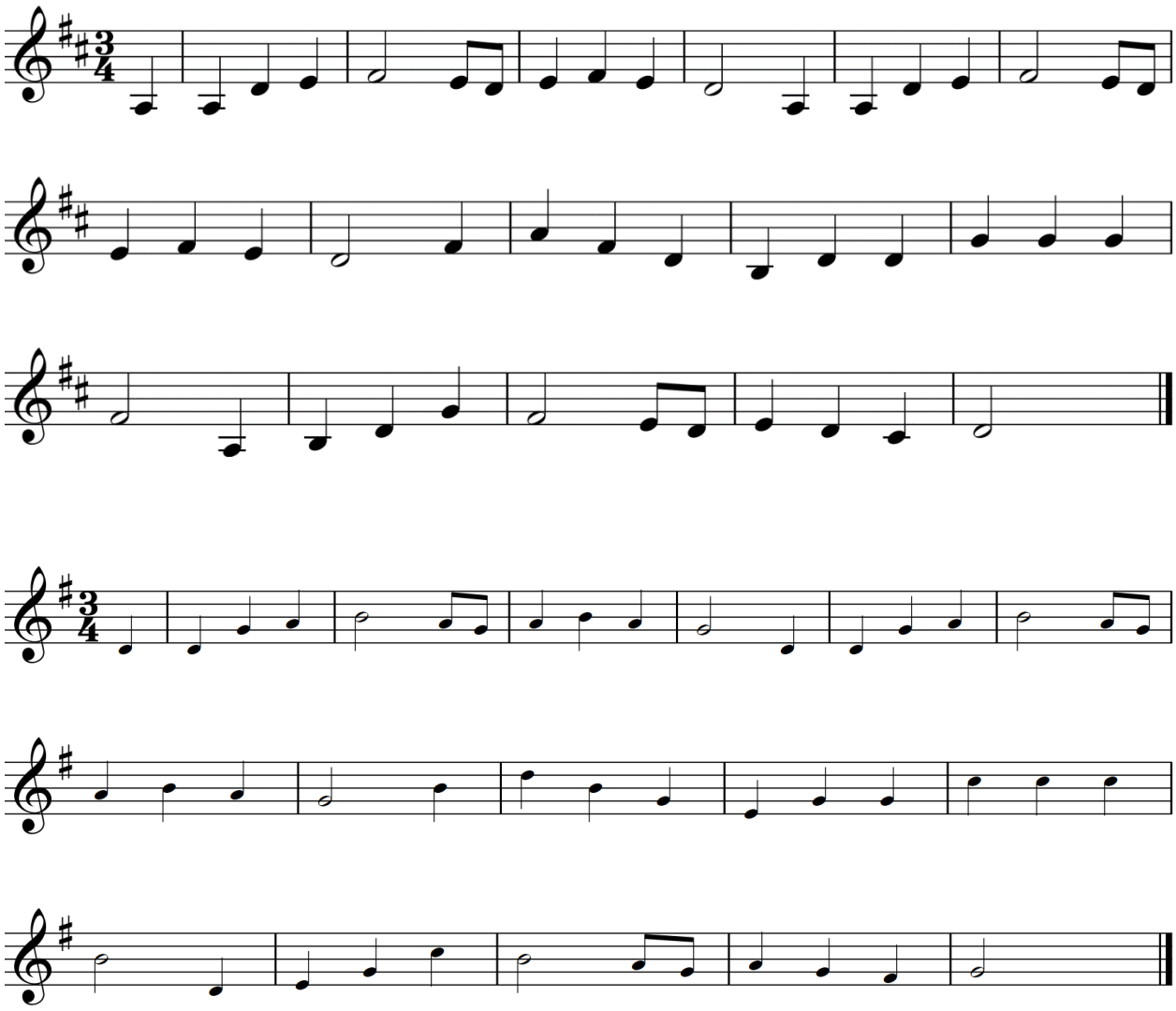
3) Sometimes we may need to transpose by intervals that are further apart. This may require the changing of clefs. In real life, this situation could happen on a Sunday morning at your church. Let's say a male singer doesn't know how to read Treble Clef and needs to have his music written in Bass Clef at the right pitch for him. He needs this piece re-written **one octave lower** and therefore changed from Treble Clef to Bass Clef. Can you do it?



4) This morning in church, your friend is singing a solo. She says that the music is too high for her to sing! She wants it transposed from Bb major down to G major. What do you do?



5) Another friend says this music is too low and wants it transposed up a Perfect 4th.



SUMMARY

- ✓ **Transposing** a piece of music means changing it from being in one key to another key.
- ✓ Transposing is done by finding the interval between the two keys, and then transposing **every note** by that same interval.
- ✓ Transposition is useful in cases where the notes are too high or low for somebody to sing or play in, or if they can't read in either Treble or Bass Clef.

Lesson 7.4 – Concert Pitch

Various instruments will sound pitches that are different from the notes written on the staff.

Concert pitch is a universal standard of pitch used for various instruments.
When an instrument is in concert pitch, we say that it is "in C". The piano is an instrument in C.
C instruments will sound a pitch that matches the pitch on a piano when playing the notes written on a staff.

This means a C instrument plays in **concert pitch**.

For example,

When we say that an instrument is "in C" that means that when that instrument plays their note C, in concert pitch it is a __C_____.

Instruments such as piano, guitar, stringed instruments and even the voice are in concert pitch. They are C instruments.

When you play a Bb on the piano and a C instrument (i.e. violin) plays a Bb, they sound the same.

Most of the instruments used in a Salvation Army brass band are called transposing instruments. This means that they play in a different key than concert pitch.

Brass instruments outside The Salvation Army, such as trumpets, trombones and tubas, are in concert pitch. The particular instruments The Salvation Army uses in brass bands are not in concert pitch. This does not mean that non-Salvation Army trombones are different than Salvation Army ones, but rather the **music they read is different**.

In the typical Salvation Army brass band, we have the following instruments:

Soprano Cornet in Eb
Cornets in Bb
Flugel Horn in Bb
Tenor Horns in Eb
Baritones in Bb
Trombones in Bb
Bass Trombone in C*
Euphoniums in Bb
Basses (Tubas) in Eb
Basses (Tubas) in Bb
Percussion

**The only instrument in concert pitch and the only instrument in Salvation Army bands written in Bass Clef.*

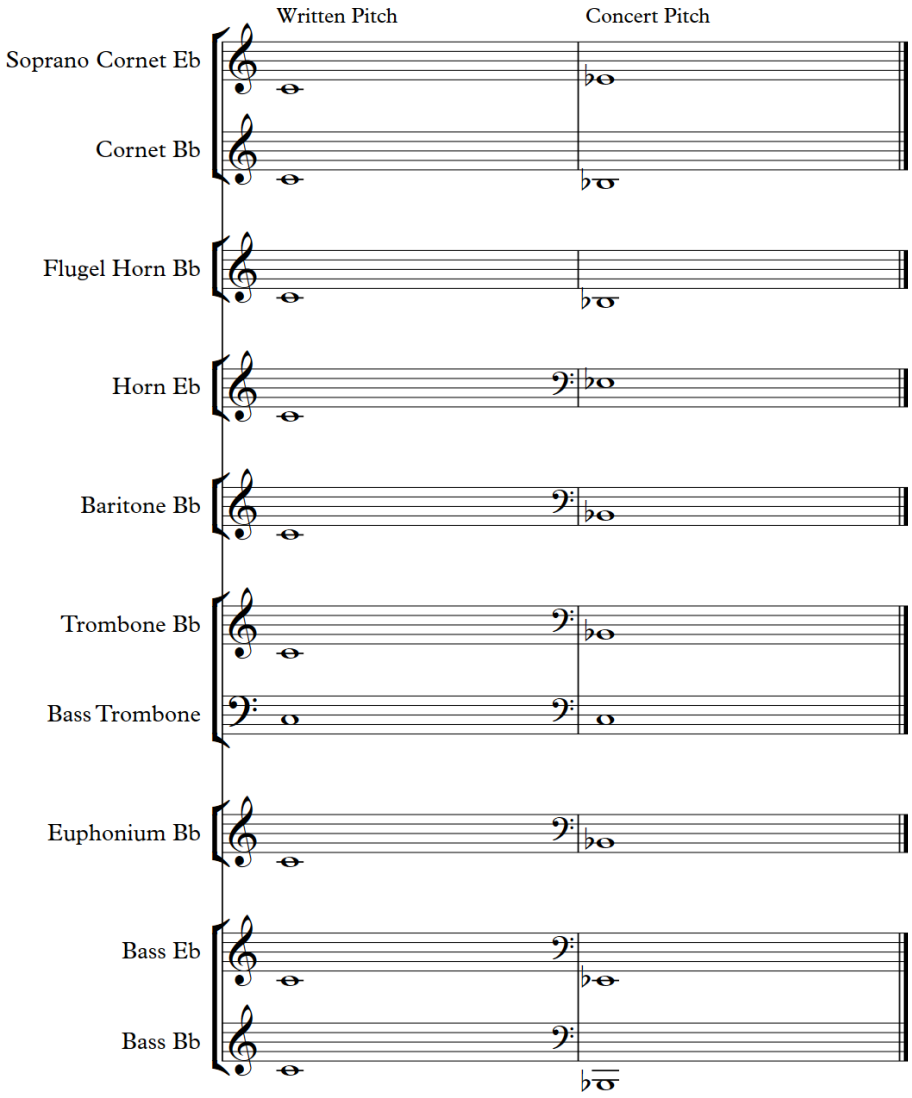
Remember, a concert pitch instrument is in C! When they play the note C, it is also a C in concert pitch.

A cornet in Bb (or a Bb cornet) is different. When a Bb cornet plays a C, it is actually a Bb in concert pitch. It is sounding a Bb! Therefore, if you play a C on a Bb cornet, you would have to play a Bb on the piano in order to match that exact pitch.

Similarly, if you play a C on an Eb horn, you would have to play an Eb on the piano in order to match pitch. You are sounding an Eb!

Each transposing instrument in a Salvation Army brass band has their written C at a certain octave in concert pitch. When you are writing for these transposing instruments, remember not only which note they are playing, but in which octave.

See the diagram on the next page for how a written middle C actually sounds when played on various Bb and Eb instruments.



NOTE: For each instrument, with the exception of the *soprano cornet* and *bass trombone*, the concert pitch is always LOWER than the note that is written.

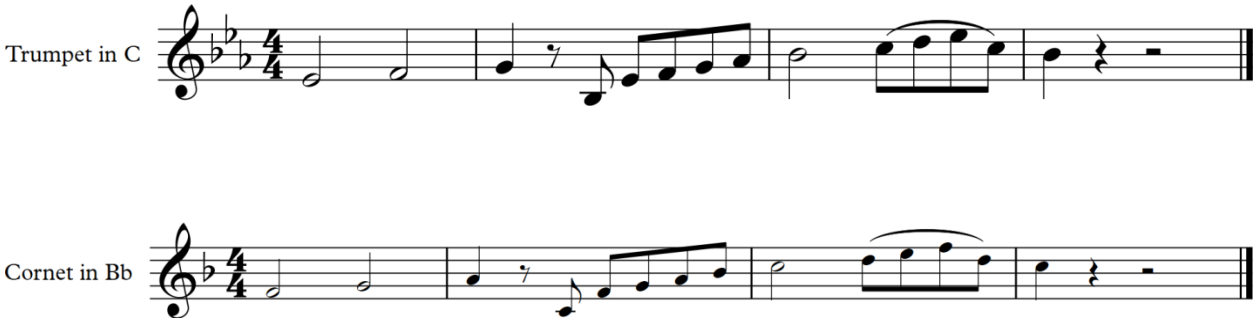
Knowing this information allows us to **transpose** between different instruments other than just those in concert pitch.

For example, you have a cornet player playing a solo in the Sunday morning service and he has music for piano. He needs you to transpose the melody line for cornet in Bb. To do this, you must take the piano melody line and transpose it **up (NOT DOWN)** by a **tone (a major 2nd)**.

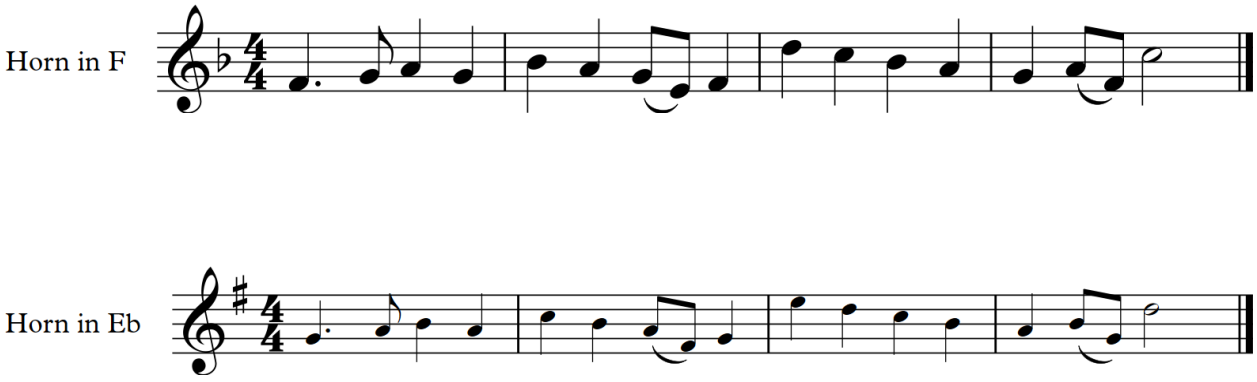
Just because you are transposing from an instrument in C to an instrument in Bb doesn't mean you should transpose down because Bb is lower than C. Rather, think about it logically and see that when a trumpet in C plays a C, the Bb cornet must play a D, not a Bb.

EXERCISE

1) Try transposing the following piece from Trumpet in C to Cornet in Bb.

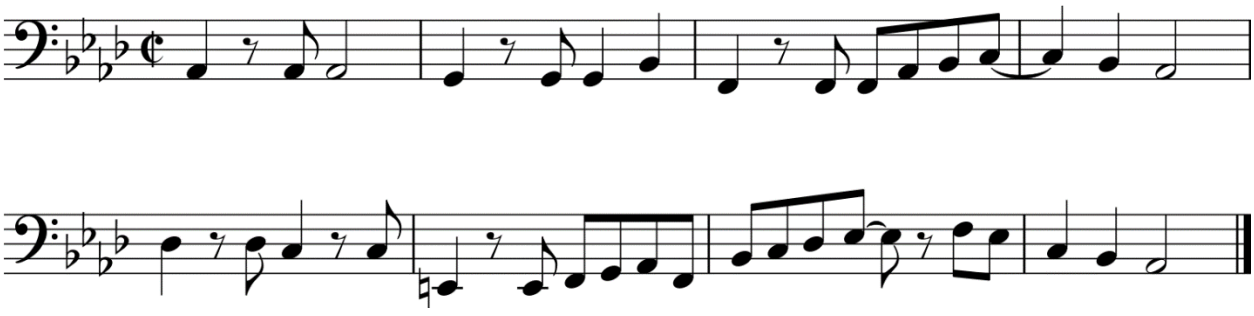


2) Imagine that an Eb horn player comes to you in a similar situation; they have music for French Horn in F and need it transposed for Tenor Horn in Eb. What do you do?

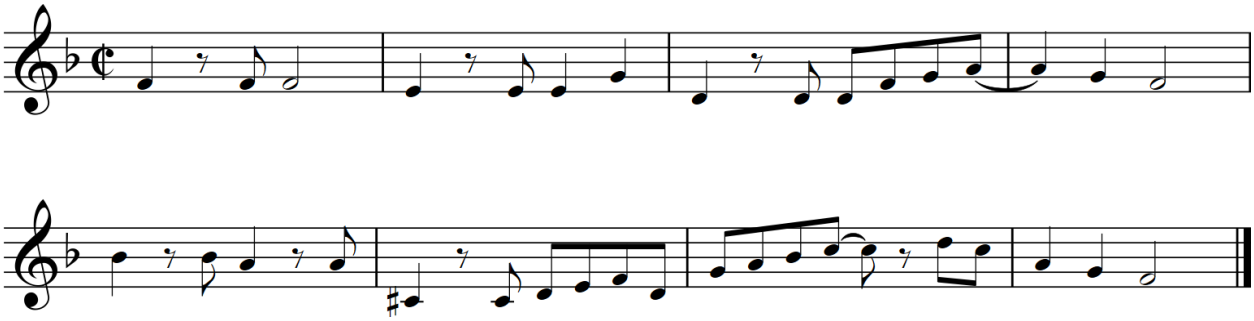


3) Now imagine that an Eb tuba player is trying to read off a bass guitar part written in bass clef. How would you transpose it in order to help him?

Bass Guitar

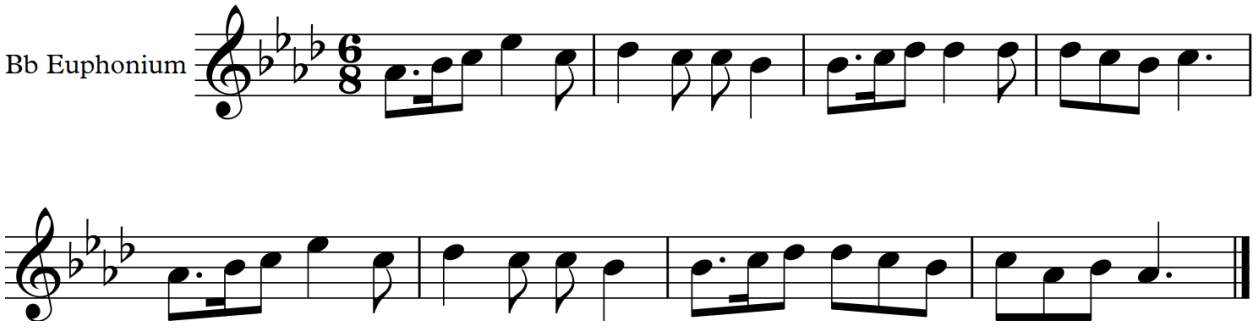


Bass Eb

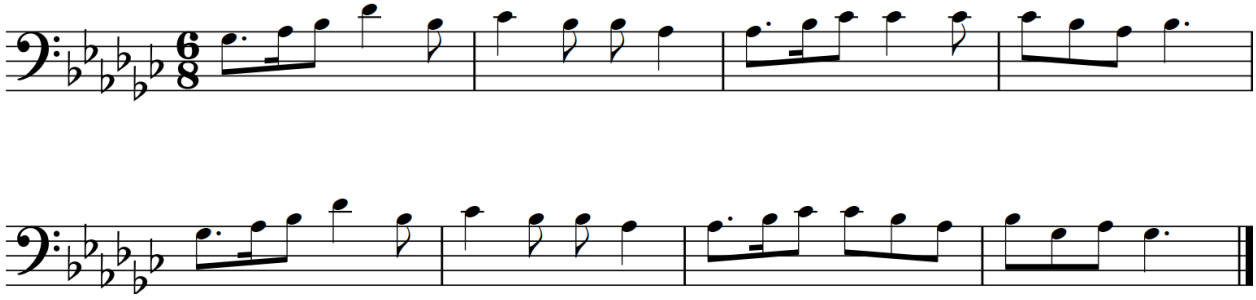


4) Another situation that could possibly come up is if a concert pitch instrument wants to use music that is already written out for a Bb cornet or euphonium. Let's say that a male singer wants to sing part of a lyrical euphonium solo. Transpose the following piece from Bb euphonium in Treble Clef to a male voice in C in Bass Clef.

Bb Euphonium

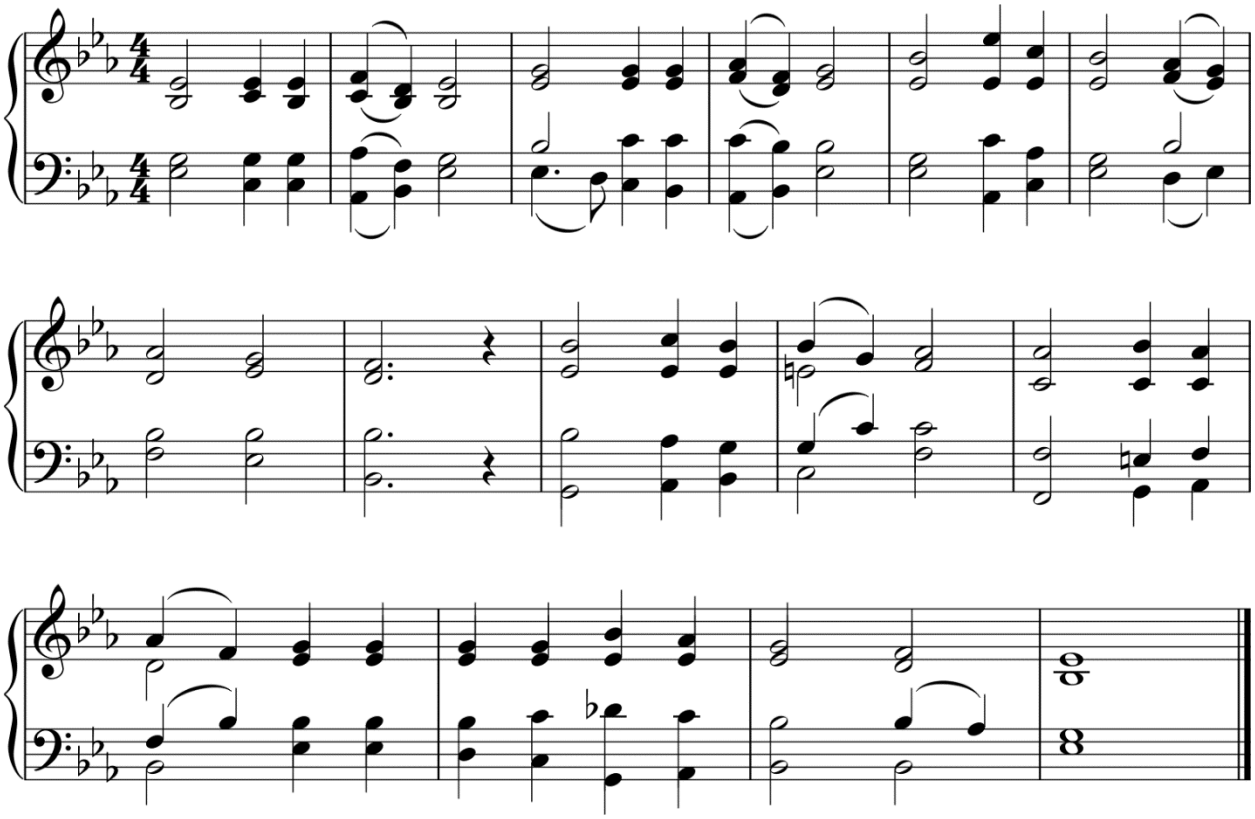


Male Voice

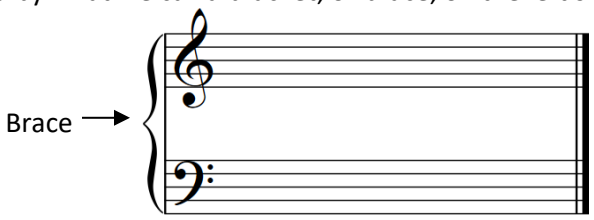


5) Re-write this four-part arrangement of the hymn tune *Ascalon*, associated with the words “Fairest Lord Jesus,” for Bb Cornet, Eb Tenor Horn, Bb Euphonium and Eb Bass.

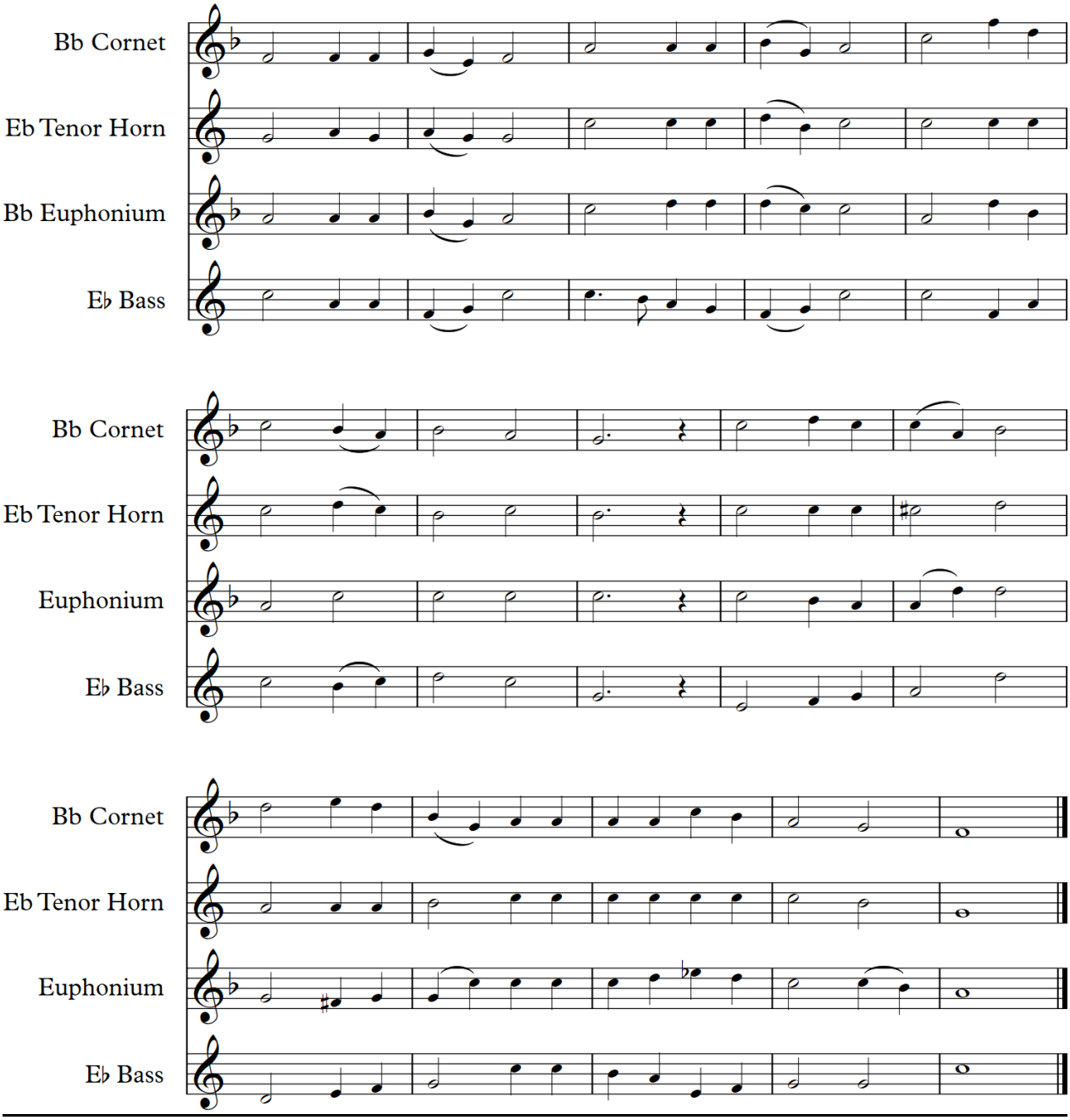
In other words, take each of the four parts in this piano arrangement and transpose it for the instrument to which it belongs.



NOTE: The above music is written on what we call the **Grand Staff**, typically used for piano music. It includes both the Treble and Bass Clefs, joined by what we call a bracket, or brace, on the left side.



Note: Students may elect to use octave alternatives in the Eb Bass part. In reality, bass notes are sometimes written an octave lower than indicated in the piano tune book.



SUMMARY

- ✓ Instruments are either in **concert pitch** (such as guitar, piano, voice, etc.) or they are a **transposing instrument**.

- ✓ Most of the instruments used in a typical Salvation Army brass band are **transposing instruments**.

- ✓ Being able to transpose for various instruments is extremely helpful in a lot of situations.

Lesson 7.5 – Time Signatures

So far, we have learned about the **time signatures** in the chart below.

Some of these are **simple time signatures.** The number on top always tells you how many beats are in a measure.
Some are **compound time signatures.** The number on top tells you how many **simple beats** there are, *but* the number of simple beats can also be **divided by three,** in order to give you a number of **compound beats.**

Time Signature	Type	No. Of Simple Beats	No. Of Compound Beats
4/4 (Common Time)	Simple	4	N/A
2/4	Simple	2	N/A
3/4	Simple	3	N/A
6/8	Compound	6	2
9/8	Compound	9	3
12/8	Compound	12	4
2/2 (Cut Time)	Simple	2	N/A

We are going to learn about some new time signatures that expand on the ones we already know.

The first new group of time signatures are a natural extension of cut time. **3/2** and **4/2** are simple time signatures, like 3/4 or 2/4, but because the bottom number is 2, **the half note gets one beat** instead of the quarter note.

The second new group of time signatures are a natural extension of compound time. **6/4**, **9/4** and **12/4** are compound time signatures (like 6/8, 9/8 and 12/8). Since the bottom number is now 4, **each simple beat is a quarter note.** Therefore, **each compound beat is three quarter notes**.

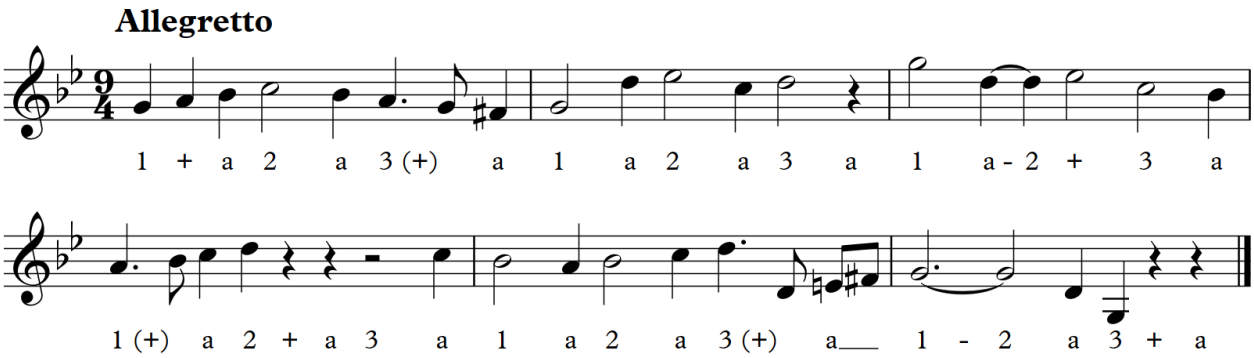
This is summarized in the chart on the following page:

Time Signature	Type	No. Of Simple Beats	No. Of Compound Beats
3/2	**Simple**	**3**	**N/A**
4/2	**Simple**	**4**	**N/A**
6/4	**Compound**	**6**	**2**
9/4	**Compound**	**9**	**3**
12/4	**Compound**	**12**	**4**

Remember that the tempo (speed) of the piece determines whether a compound time signature is counted in simple beats or compound beats. If it is slow, then count in terms of simple beats. If it is fast, then count in terms of compound beats.

These time signatures are counted the same way as in previous time signatures.

Look at the following example. What is the key? _G__ _minor_____



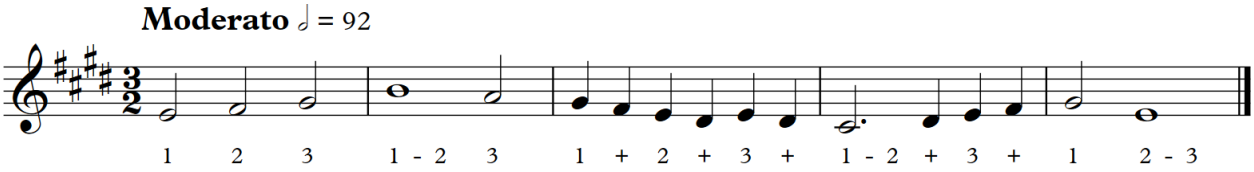
NOTE: The notes and rests are grouped into three's, just as is the typical rule for compound time signatures.

EXERCISE

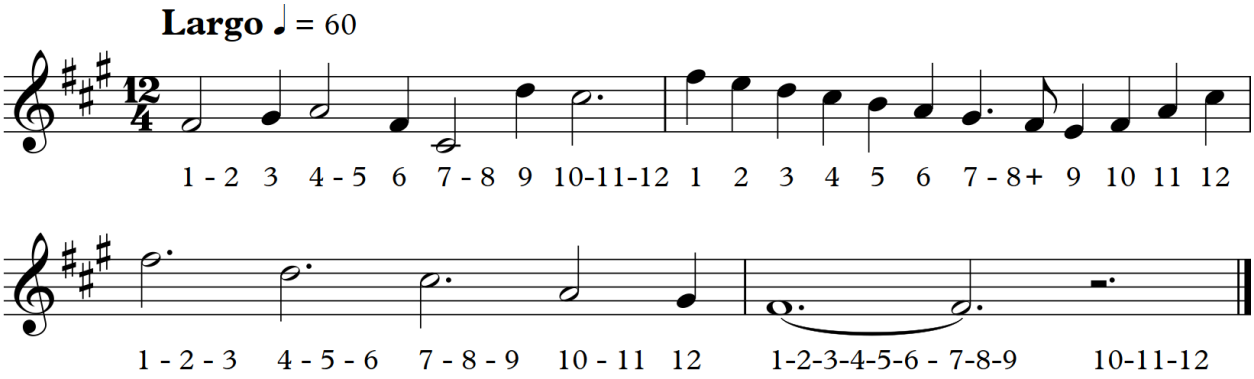
Name the key of each piece below. Write in the counts underneath.

BONUS: Clap the rhythm out loud while saying the counts you have written.

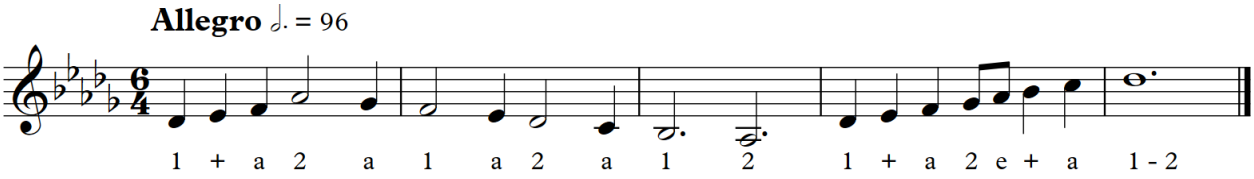
1) Key: __E__ __major_____



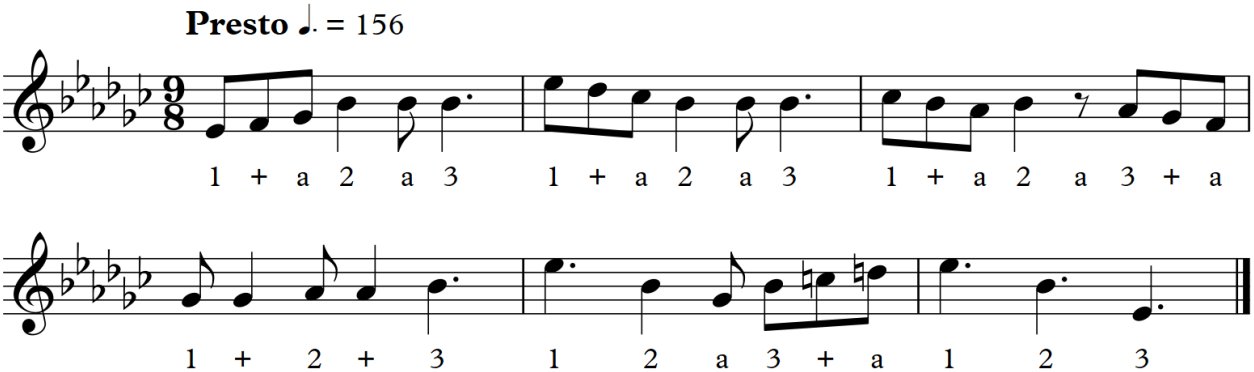
2) Key: _F#__ __minor_____



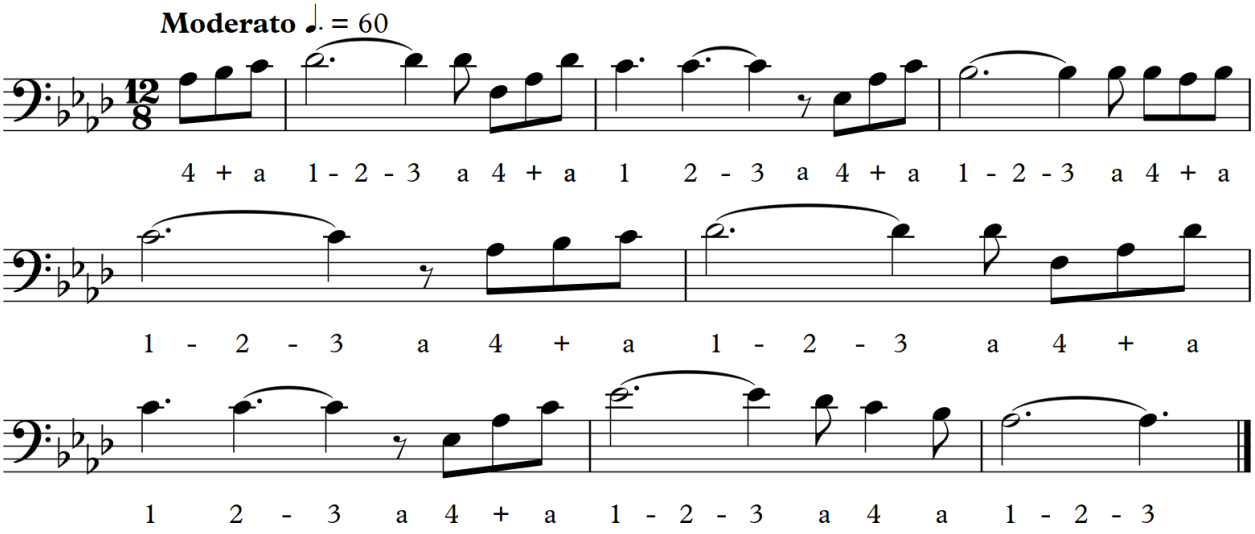
3) Key: _Db__ __major_____



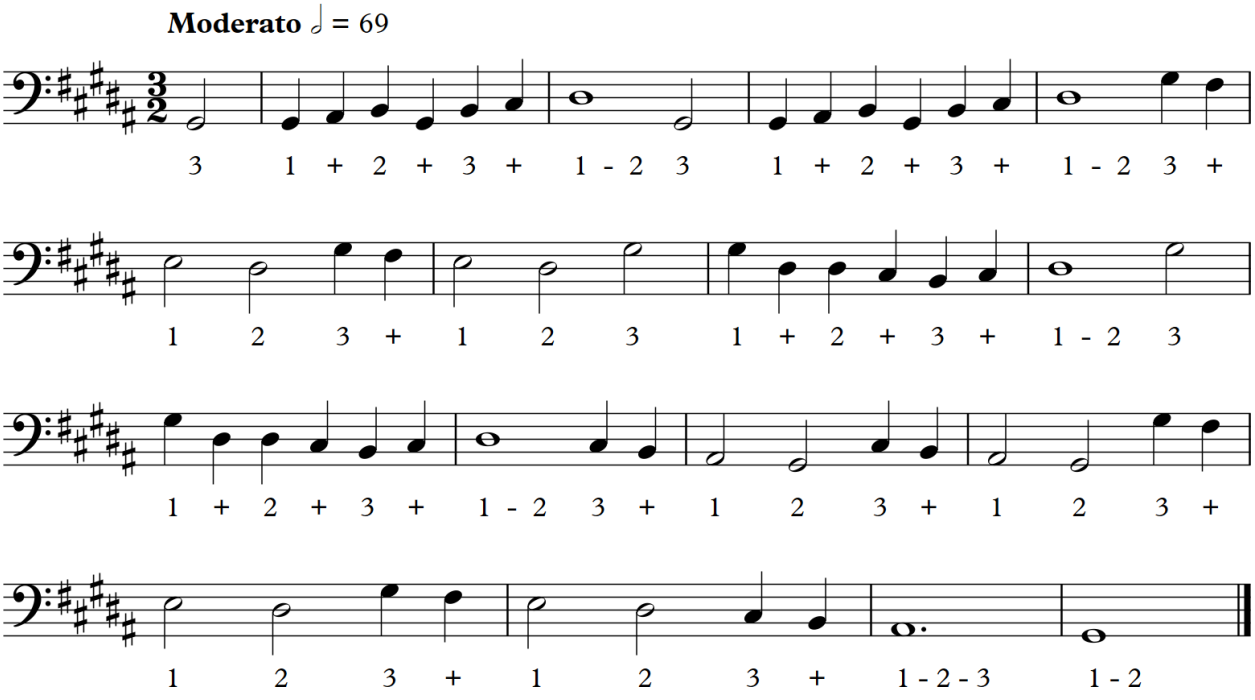
4) Key: _Eb__ __minor_____



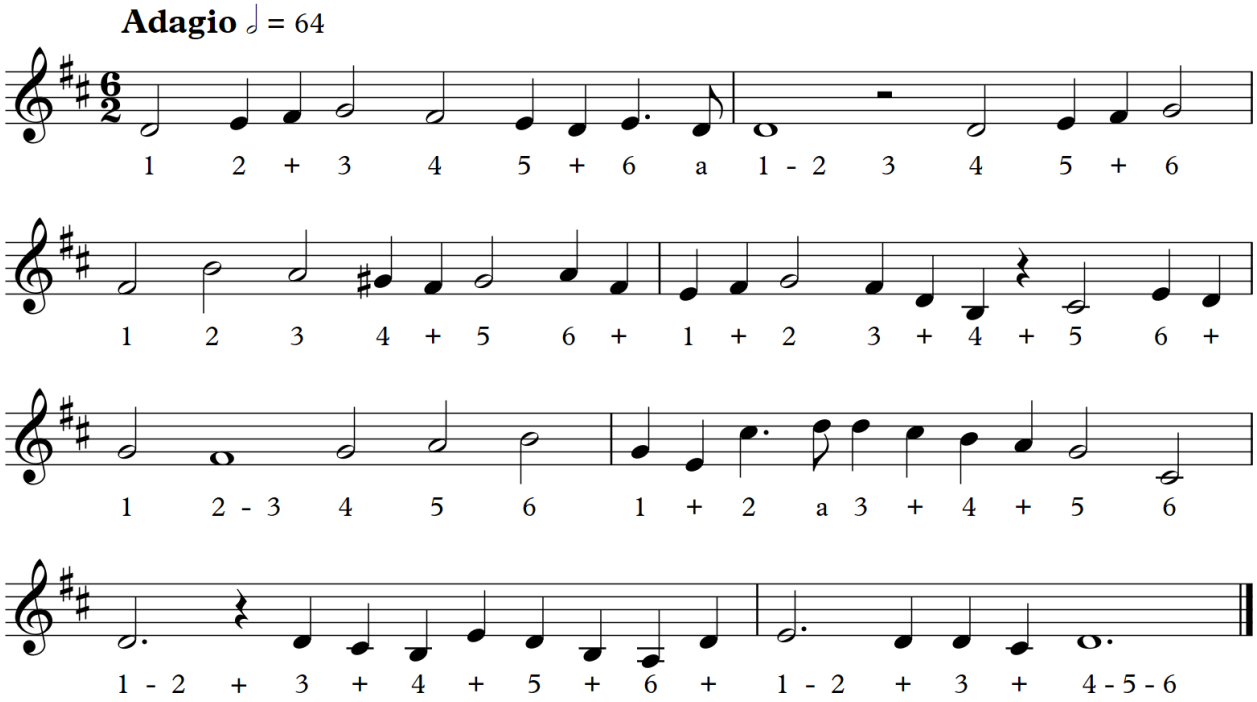
5) Key: Ab major



6) Key: G# minor



7) Key: _D___ __major____



SUMMARY

- ✓ In **simple time signatures**, the number on top tells you how many beats are in a measure.
- ✓ In **compound time signatures**, the number on top tells you how many **simple beats** there are, but the number of simple beats can also be divided by three, giving you **compound beats.**
- ✓ **3/2** and **4/2** are simple time signatures. The **half note** gets one beat.
- ✓ **6/4, 9/4** and **12/4** are compound time signatures. Each **simple beat** is a quarter note. Therefore, each **compound beat** is three quarter notes.
- ✓ The speed of a piece determines whether a compound time signature is counted in simple beats or compound beats.

Musical Terms

Along with how fast to play music, composers sometimes tell us the *style.* Below are more style terms that you might see, in addition to the ones we have previously learned:

Italian Term	English Translation
Animato	Animated/with life (more tempo)
Cantabile	In a singing style
Con anima	With life (more tempo)
Con moto	With motion (more tempo)
Con brio	With brightness (brightly)
Con fuoco	With fire (passionate)
Leggiero	Light
Maestoso	Majestically
Rubato	Not strict tempo, one can slow down and speed up expressively with the music
Sostenuto	Sustained/legato

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