

# **Eastern Kentucky University School of Music**



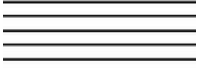
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## **Music Theory Study Guide for Prospective Music Students**

**Compiled by  
Dr. Richard Byrd**

## Lesson One: Musical Symbols

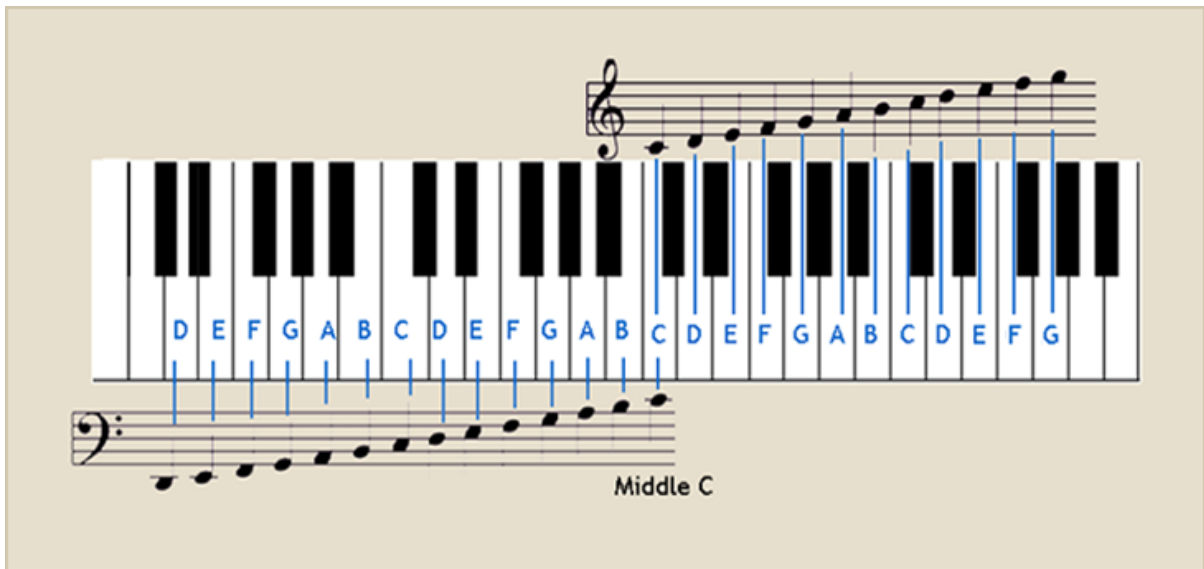
**Staff**—a set of five parallel horizontal lines and four intervening spaces that each represents a musical pitch.



**Grand staff**—the combination of the treble and bass clefs joined together by a brace.

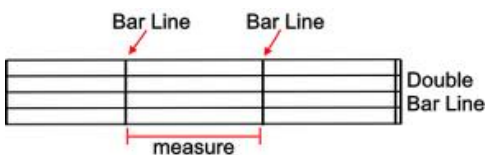


**Middle C**—the name given to the pitch C which is near the middle of the piano keyboard.



**Bar line**—a symbol used to organize music into groupings or patterns.

**Double bar line**—a symbol used to mark the end of a composition or the end of a major section of a composition.



**Ledger lines**—short lines equidistant from each other used to extend the staff above or below the written staff.



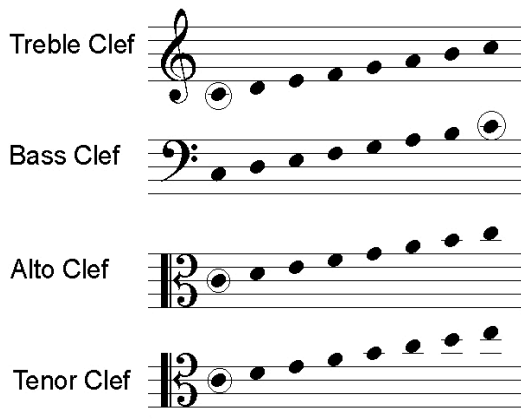
**Clef**—indicates where the pitch letter names are placed on the staff.

**Treble clef**—also called the G clef, it designates the pitch g with a lower loop.

**Bass clef**—also called the F clef, it designates the pitch f with two dots.

**Alto clef**—a specific kind of C clef, it designates the Middle C pitch with an indentation.

**Tenor clef**—a specific kind of C clef, it designates the Middle C pitch with an indentation.



(Middle C is circled on each of the scales above.)

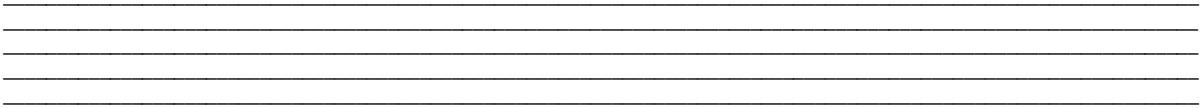
**Accidentals**—chromatic alterations placed directly before the affected note and on the same line or space as the note head (flat, sharp, double flat, double sharp, double flat, natural). A flat lowers the pitch by one half step and a sharp raises the pitch by one half step. A double flat lowers the pitch by one whole step and a double sharp raises the pitch by one whole step.



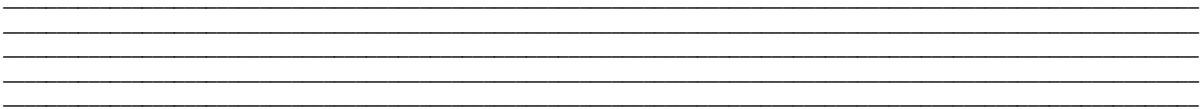
**Note:** It is important to make sure that you carefully notate each accidental so that the middle of each accidental is centered on either the line or the space that it is marking.

**Lesson One: Musical Symbols**  
**Practice Questions**

1) Write one of each of the four clefs (treble, bass, alto, tenor) on the staff below.



2) Write one of each accidental (flat, sharp, double flat, double sharp, natural) on the staff below.



3) Identify the following pitches in various clefs by placing the correct pitch letter name below each pitch.

4) Notate the requested pitches in the various clefs on the staff below.

## Lesson Two: Key Signatures & Scale Degree Names

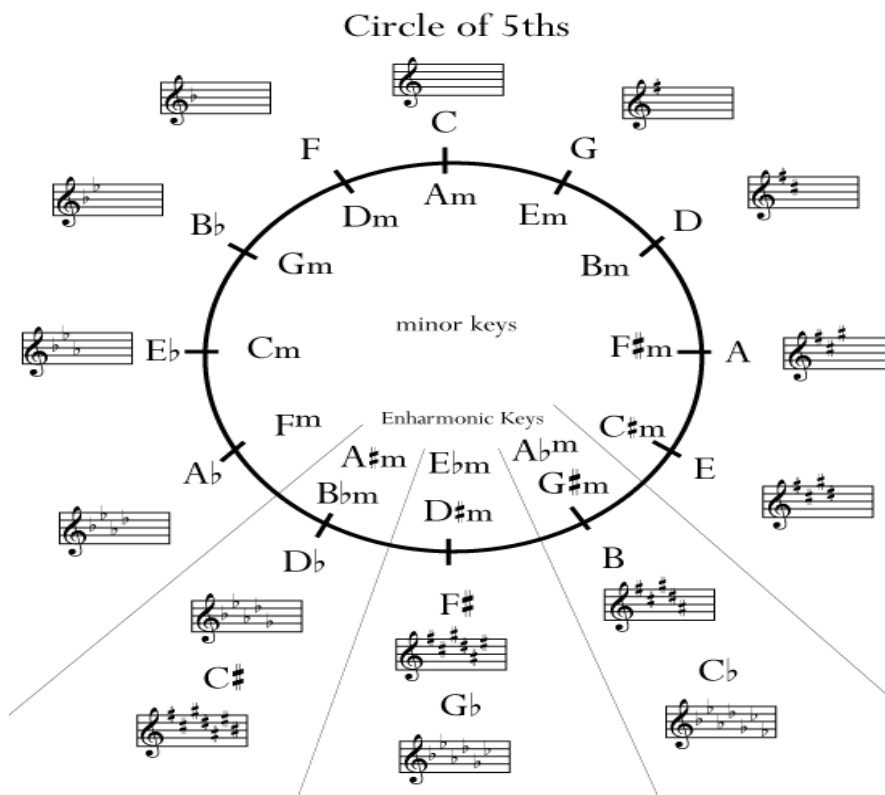
**Key signature**—accidentals written at the beginning of a composition (which can be changed throughout the work) used to designate the key or tonality of a work.

The **order of flats** is always: Bb, Eb, Ab, Db, Gb, Cb, Fb

The **order of sharps** is always: F#, C#, G#, D#, A#, E#, B#



**Circle of fifths**—a diagram that illustrates the order of keys from the least to the greatest number of sharps (clockwise), and the least to the greatest number of flats (counterclockwise)



The order for the placement of sharps and flats:

|   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
| # | F | C | G | D | A | E | B |
| b | B | E | A | D | G | C | F |

**Note:** It is best to just memorize both the major and minor key signatures! There are just 15 major keys and 15 minor keys to learn for a total of 30 keys. While there are all sorts of clever methods to use to figure out the keys, it is in your best interest to have all the keys memorized without using aids to “figure out the keys.” For example, when you see a key signature of 4 sharps, 2 keys should IMMEDIATELY pop into your head—E major and c# minor. Using tricks and other clever methods will ultimately slow you down and potentially increase the possibility for error for more complicated theory problems.

**Note:** The flats and sharps appear in the same order and pattern for key signatures written in both the alto and tenor clefs).

**Relative Keys**—the pair of major and minor keys that share the same key signature (e.g., G major and e minor both share the same key signature of 1 sharp).

**Parallel Keys**—the pair of major and minor keys that share the same tonic note (e.g., C major and c minor both share the same c tonic pitch).

**Enharmonic Keys**—the pair of major keys or pair of minor keys that share the same tonic note in sound, but are written with a different key signature. (e.g., C# major and Db major both share the same tonic note in sound, but are written as 7 sharps and 5 flats respectively).

**Scale degree names**—the traditional names given to the pitches of a scale as represented by their order.

1<sup>st</sup> scale degree—**tonic**

2<sup>nd</sup> scale degree—**supertonic**

3<sup>rd</sup> scale degree—**mediant**

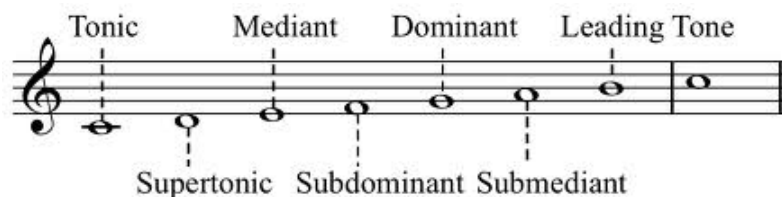
4<sup>th</sup> scale degree—**subdominant**

5<sup>th</sup> scale degree—**dominant**

6<sup>th</sup> scale degree—**submediant**

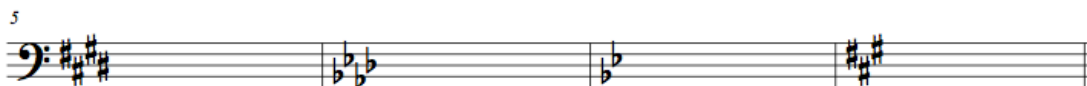
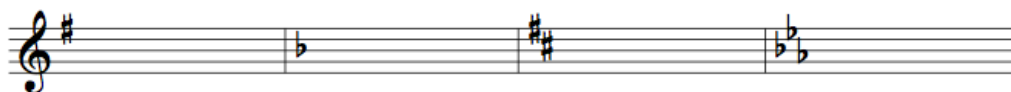
7<sup>th</sup> scale degree—**leading tone** or **subtonic**

(The term leading tone is used for a raised 7<sup>th</sup> and the term subtonic is used for a lowered 7<sup>th</sup>)



**Lesson Two: Key Signatures & Scale Degree Names**  
**Practice Questions**

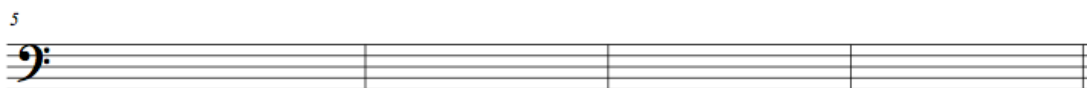
- 1) List the correct order of flats: \_\_\_\_\_
- 2) List the correct order of sharps: \_\_\_\_\_
- 3) What is the relative key of f minor? \_\_\_\_\_
- 4) What is the relative key of B major? \_\_\_\_\_
- 5) What is the parallel key of c# minor? \_\_\_\_\_
- 6) What is the parallel key of Eb major? \_\_\_\_\_
- 7) What is the enharmonic key of B major? \_\_\_\_\_
- 8) What is the enharmonic key of F# major? \_\_\_\_\_
- 9) Name the following keys with both a major and minor key for each key signature:



- 10) Write the key signature for the requested keys:



D Major                      Eb Major                      c# minor                      bb minor



F# Major                      Ab Major                      g minor                      E Major

- 11) Name all 7 scale degrees in order:

1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6 \_\_\_\_\_ 7 \_\_\_\_\_

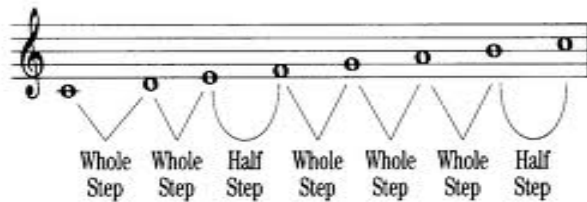
### Lesson Three: Major and Minor Scales

**Half step**—the shortest interval traditionally used in Western music, represented by two adjacent keys on the piano (e.g., B—C, D—Eb, F—F#, etc.).

**Whole step**—the combination of two half steps (e.g., G—A, B—C#, D—E, G#—A#).

**Major scale**—a series of seven consecutive letter-name pitches found diatonically in its major key with a pattern of whole steps and half steps as follows: W W H W W W H.

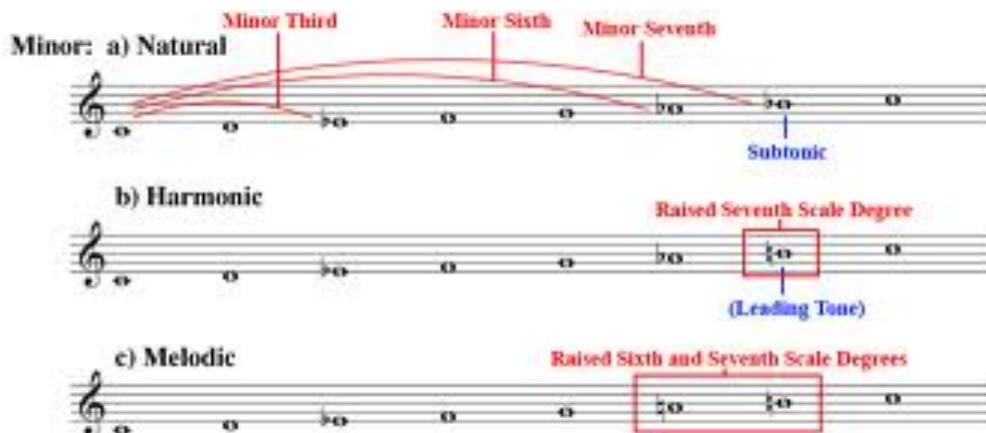
#### *C Major Scale*



**Natural minor scale**—a series of seven consecutive letter-name pitches found diatonically in its minor key with a pattern of whole steps and half steps as follows: W H W W H W W.

**Harmonic minor scale**—a natural minor scale with the seventh scale degree raised one half step. Note that this scale creates the interval of an augmented 2<sup>nd</sup> between the 6<sup>th</sup> & 7<sup>th</sup> scale degrees.

**Melodic minor scale**—a natural minor scale with the sixth and seventh scale degrees raised one half step in the ascending part of the scale, and a return (or re-lowering of the sixth and seventh scale degrees one half step) of the natural minor scale in the descending part of the scale.





While it is possible to spell all the major and minor scales using the patterns shown above, it is much more efficient (and easier) to use the key signatures that you memorized in the previous lesson. Here are some examples of how this would work:

**To spell an E major scale:**

- 1) Write all the alphabet letters through one octave starting with an E on the staff using whatever clef is requested as follows: E, F, G, A, B, C, D, E.
- 2) Apply (plug in) all the sharps or flats of the requested scale in front of all notes that apply. Since there are 4 sharps in the key of E major (F#, C#, G#, D#), place these four sharps in front of the corresponding pitches as follows: E, F#, G#, A, B, C#, D#, E. Notice that this answer illustrates the W W H W W W H major scale pattern.

**To spell an e natural minor scale:**

- 1) Write all the alphabet letters through one octave starting with an E on the staff using whatever clef is requested as follows: E, F, G, A, B, C, D, E.
- 2) Apply (plug in) all the sharps or flats of the requested scale in front of all notes that apply. Since there is 1 sharp in the key of E minor (F#), place that sharp in front of the corresponding pitch as follows: E, F#, G, A, B, C, D, E. Notice that this answer illustrates the W H W W H W W natural minor scale pattern.

**To spell an e harmonic minor scale:**

- 1) Write all the alphabet letters through one octave starting with an E on the staff using whatever clef is requested as follows: E, F, G, A, B, C, D, E.
- 2) Spell an e natural minor scale as shown above: E, F#, G, A, B, C, D, E
- 3) Raise the 7<sup>th</sup> scale degree by changing D to a D# as follows: E, F#, G, A, B, C, D#, E.

**Note:** Each letter of the alphabet must be represented, so be careful not to use enharmonic pitches that represent the same alphabet letter. For example, in e harmonic minor, you should use a D# for the 7<sup>th</sup> scale degree rather than an Eb, otherwise there would be no alphabet letter represented for the letter D (e.g., E, F#, G, A, B, C, D#, E is correct and E, F#, G, A, B, C, Eb, E is incorrect).

**To spell an e melodic minor scale:**

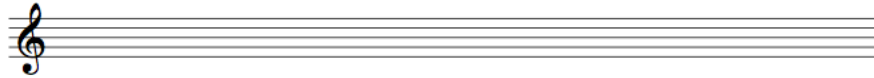
- 1) Write all the alphabet letters through one octave starting with an E on the staff using whatever clef is requested as follows: E, F, G, A, B, C, D, E.
- 2) Spell an e natural minor scale as shown above: E, F#, G, A, B, C, D, E
- 3) Raise both the 6<sup>th</sup> and 7<sup>th</sup> scale degree by changing C to C# and D to a D# as follows: E, F#, G, A, B, C#, D#, E for the ascending part of the scale, and return the C# and D# back to its natural minor form as a C and D for the descending part of the scale:



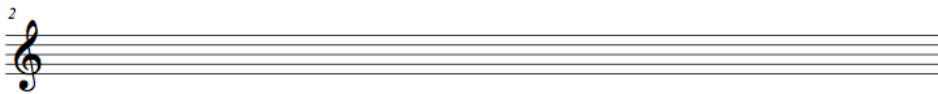
**Lesson Three: Major and Minor Scales**  
**Practice Questions**

- 1) Spell the following requested scales without writing in the key signature by adding in the appropriate accidentals:

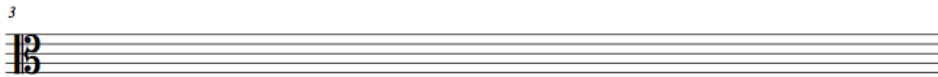
**Note:** Be sure to write both the ascending and descending form of the melodic minor scale. All other scales can be spelled with just the ascending form.



D Major



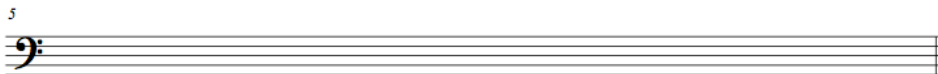
F natural minor



B harmonic minor



D# harmonic minor



Ab melodic minor

- 2) Write in the missing pitches in the blanks provided for the following requested scales:

F# Major: F# G# \_\_\_\_\_ B C# D# \_\_\_\_\_ F#

Eb harmonic minor: Eb F \_\_\_\_\_ Ab Bb Cb \_\_\_\_\_ Eb

Ab Major: Ab Bb C \_\_\_\_\_ Eb F \_\_\_\_\_ Ab

B melodic minor: B \_\_\_\_\_ D E F# \_\_\_\_\_ A# B \_\_\_\_\_ G F# E D \_\_\_\_\_ B

G# natural minor: G# \_\_\_\_\_ B C# \_\_\_\_\_ E F# G#

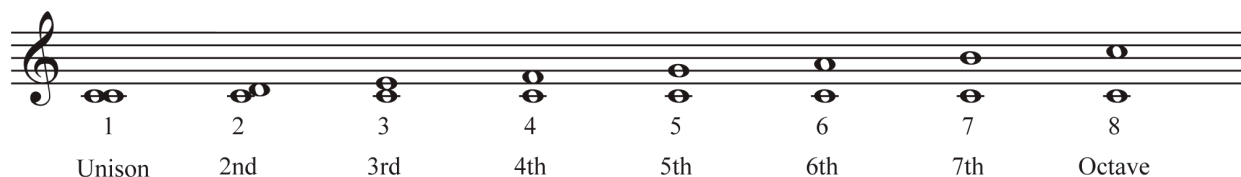
- 3) What is the 6<sup>th</sup> scale degree of a B Major scale? \_\_\_\_\_  
 4) What is the 3<sup>rd</sup> scale degree of a c# natural minor scale? \_\_\_\_\_  
 5) What is the 7<sup>th</sup> scale degree of an f# harmonic minor scale? \_\_\_\_\_  
 6) What is the ascending 6<sup>th</sup> scale degree of a c melodic minor scale? \_\_\_\_\_  
 7) What is the descending 7<sup>th</sup> scale degree of a g melodic minor scale? \_\_\_\_\_

## Lesson Four: Intervals

**Interval**—term used to measure the distance between two pitches. Each interval is comprised of two parts—the interval quality and the interval size.

**Interval quality**—describes the quality of the interval with the following descriptions: **perfect** (P), **major** (M), **minor** (m), diminished (o), and **augmented** (+).

**Interval size**—describes the size of the interval which is measured by how far apart the notes are on the staff with the following numbers: **unisons**, **seconds**, **thirds**, **fourths**, **fifths**, **sixths**, **sevenths**, and **octaves**.



**Melodic intervals**—the distance measured horizontally between any two adjacent pitches.

**Harmonic intervals**—the distance measured vertically between any two simultaneously sounding pitches.

**Simple intervals**—intervals that are smaller than an octave (including the octave).

**Compound intervals**—intervals that are larger than an octave (e.g., m9 is a m2 plus an octave, M10 is a M3 plus an octave, P11 is a P4 plus an octave, etc.)

The term perfect (abbreviated P) is only used for unisons, 4ths, 5ths, and octaves (and their compound intervals) as follows: P1, P4, P5, and P8. (P is NEVER used to describe 2nds, 3rds, 6ths, or 7ths)

The term major (abbreviated M) or minor (abbreviated m) is only used for 2nds, 3rds, 6ths, and 7ths (and their compound intervals) as follows: M2, m2, M3, m3, M6, m6, M7, m7. (M and m are NEVER used to describe unisons, 4ths, 5ths, or octaves)

The term augmented (abbreviated +) is used when a perfect or major interval is raised a half step without changing the numerical name as follows: P1 → +1 (C—C#), M2 → +2 (C—D#), M3 → +3 (C—E#), P4 → +4 (C—F#), P5 → +5 (C—G#), M6 → +6 (C—A#), M7 → +7 (C—B#), P8 → +8 (C—C#).

**NOTE:** If a minor interval is raised a half step it just becomes a major interval, not an augmented interval.

The term diminished (abbreviated o) is used when a perfect or minor interval is lowered a half step without changing the numerical name as follows: m2 → o2 (C—D $\flat$ ), m3 → o3 (C—E $\flat$ ), P4 → o4 (C—F $\flat$ ), P5 → o5 (C—G $\flat$ ), o6 (C—A $\flat$ ), o7 (C—B $\flat$ ), P8 → o8 (C—C $\flat$ ).

**NOTE:** If a major interval is lowered a half step it just becomes a minor interval, not a diminished interval.

**One easy way to identify intervals is to relate them to the intervals found in the major scale, specifically the intervals from the first scale degree up to the other scale degrees.**

**You should learn to convert intervals by raising and lowering them to form smaller or larger intervals.** The following chart shows the hierarchy of the major and minor intervals from smallest to largest—going from diminished to minor to major to augmented for the 2nds, 3rds, 6ths, and 7ths., and the hierarchy of the perfect intervals from smallest to largest—going from diminished to perfect to augmented for the unisons, 4ths, 5ths, and octaves.

The chart displays intervals on a treble clef staff in C major. The intervals are categorized by their size and quality:

- Unison:** aug (C to C $\sharp$ ), dim (C to B $\flat$ ), min (C to B), maj (C to C $\sharp$ ), aug (C to C $\sharp$ )
- Third:** dim (C to E $\flat$ ), min (C to E), maj (C to G), aug (C to G $\sharp$ ), per (C to F), aug (C to F $\sharp$ )
- Fifth:** dim (C to G $\flat$ ), per (C to F), aug (C to F $\sharp$ ), sixth intervals: dim (C to A $\flat$ ), min (C to A), maj (C to B), aug (C to B $\sharp$ )
- Seventh:** dim (C to A $\flat$ ), min (C to A), maj (C to B), aug (C to B $\sharp$ )
- Octave:** dim (C to C $\flat$ ), per (C to C), aug (C to C $\sharp$ )

Notice how that many intervals have a different name, but produce the same sound, for example, a M3 and a o4 have the same sound but are spelled differently. It is important to remember the size of the interval reflects how many pitch letter names it contains, so G to B must be some type of third because it contains 3 pitch letter names (G, A, and B), whereas G to C $\flat$  must be some type of fourth because it contains 4 pitches letter names (G, A, B, and C). Therefore, the interval G to C $\flat$  would be incorrectly labeled as a M3 even though C $\flat$  is the same pitch as B—it must be correctly labeled as a diminished 4th.

**NOTE:** Calculating intervals by counting half steps and/or whole steps is sometimes easier and faster, but is more often time consuming and has a greater likelihood of producing errors.

**Lesson Four: Intervals**  
**Practice Questions**

1) Identify each interval with the correct quality and size. (e.g., P4, M3, m6, +5, o7, etc.)

Measures 1-8: Treble clef, C4, D4, E4, F4, G4, A4, B4, C5.

Measures 9-16: Bass clef, C3, D3, E3, F3, G3, A3, B3, C4.

Measures 17-24: Bass clef, C3, D3, E3, F3, G3, A3, B3, C4.

Measures 25-32: Bass clef, C3, D3, E3, F3, G3, A3, B3, C4.

2) Write the requested intervals above the given pitches with the correct quality and size.

Measures 1-8: Treble clef, C4, D4, E4, F4, G4, A4, B4, C5.  
Labels: m3, P4, M7, P5, +6, o5, +7, M3

Measures 9-16: Bass clef, C3, D3, E3, F3, G3, A3, B3, C4.  
Labels: +5, m2, m7, o4, m6, M7, m3, P8

Measures 17-24: Bass clef, C3, D3, E3, F3, G3, A3, B3, C4.  
Labels: M3, +4, M6, o7, +5, m2, +8, M7

Measures 25-32: Bass clef, C3, D3, E3, F3, G3, A3, B3, C4.  
Labels: +2, m3, P4, +6, P5, M3, o7, o3

## Lesson Five: Chords (Arpeggios)

**Chord**—a group of notes sounding simultaneously (block chord) or in close succession (broken chord or *arpeggio*)

**Major triad**—a chord consisting of three different pitches that comprise the first, third and fifth scale degrees of a major scale. It is comprised of major 3<sup>rd</sup> and a minor 3<sup>rd</sup>.

**Minor triad**—a chord consisting of three different pitches that comprise the first, third, and fifth scale degrees of a minor scale. It is comprised of a minor 3<sup>rd</sup> and a major 3<sup>rd</sup>.

**Diminished triad**—a minor triad that has the fifth of the chord lowered by one half step. It is comprised of two minor thirds.

**Augmented triad**—a major triad that has the fifth of the chord raised by one half step. It is comprised of two major thirds.

**One of the easiest ways to spell any triad is to 1) memorize the quality of the chords that are used in the C Major scale and 2) be able to convert any triad to a different triad.**

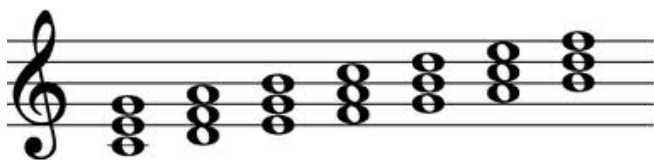
Chord qualities in the C major scale:

The triads built on scale degrees 1, 4 and 5 are major.

The triads built on scale degrees 2, 3, and 6 are minor.

The triad built on scale degree 7 is diminished.

Therefore, every triad that starts on a the letters C, F, or G will always result in a major triad if all accidentals are the same, and every chord that starts on the letters D, E, or A will always result in a minor triad if all accidentals are the same, and every chord that starts on the letter B will always result in a diminished triad if all accidentals are the same.



|   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| M | m | m | M | M | m | o |

Examples:

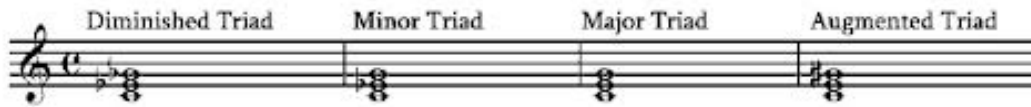
If you want to spell a major triad starting on the pitch C#, then keep all the accidentals the same, and you will produce a C# major triad—C#, E#, G#.

If you want to spell a minor triad starting on the pitch Eb, then keep all the accidentals the same, and you will produce an Eb minor triad—Eb, Gb, Bb.

If you want to spell a diminished triad starting on the pitch Bb, then keep all the accidentals the same, and you will produce a Bb diminished triad—Bb, Db, Fb.

### Converting triads to different triads:

You will be able to convert triads by knowing the differences between each triad. An augmented triad is a major triad with the 5<sup>th</sup> of the chord raised a half step. A diminished triad is a minor triad with the 5<sup>th</sup> of the chord lowered a half step. A minor triad is a major triad with the 3<sup>rd</sup> of the chord lowered a half step, and conversely a major triad is a minor triad with the 3<sup>rd</sup> of the chord raised a half step.



So what happens if you want to spell a major triad using this system, but you are asked to start on the pitch Db? You will need to first spell the chord as a minor triad and then convert that minor triad to a major triad. So if you want to spell a Db major triad, then you would first spell a Db minor triad by starting on a Db and keeping all the accidentals the same for each of the other triad pitches—Db, Fb, Ab. Then you would need to convert that minor triad to a major triad by raising the 3<sup>rd</sup> of the chord a half step from an Fb to an F, which would then produce the desired major triad starting on a Db—Db, F, Ab.

While you certainly can spell all your triads by using your major and minor key signatures that you have learned, this system will prove to be helpful when you want to spell triads on pitches that do not have major or minor key signatures—for example, if you wanted to spell a G# major triad, you could not use the G# major key signature since it does not exist. It would be very easy to produce the answer G#, B#, D# without using any key signatures, since you learned that any triad that begins on the pitch G that has all accidentals the same will produce a major triad.

Also, you will find this system helpful when you want to spell tricky triads, but are not given the tonic note—for example, if you were asked to spell an augmented triad and were given the pitch D# as the 3<sup>rd</sup> of the chord, then you could approach the problem like this:

- 1) write in the chord letter names using the same accidentals as the given pitch, so you would write B#, D#, F# and notice that this yields a diminished triad since it begins on the pitch B.
- 2) convert this diminished triad to a minor triad by raising the 5<sup>th</sup> of the chord F# to an Fx.
- 3) convert this minor triad to a major triad by raising the 3<sup>rd</sup> of the chord, but since that is the given pitch (which you are not allowed to change), then you must lower the surrounding pitches B# to a B and the Fx to an F#.
- 4) convert this major triad to an augmented triad by raising the 5<sup>th</sup> of the chord F# to an Fx.

Now you have produced an augmented triad of B, D#, Fx when you were only given the 3<sup>rd</sup> of the triad. This may seem tricky at first, but with practice it will become an invaluable tool to you.

## Lesson Five: Chords (Arpeggios) Practice Questions

- 1) Using the symbols M, m, o, and +, identify each triad as either major (M), minor (m), diminished (o), or augmented (+).

7

13

19

- 2) Spell each requested chord on the staff using accidentals when necessary. Be careful to observe which note you are given—it will be labeled as the root, 3<sup>rd</sup>, or 5<sup>th</sup> of the chord.

M (root)    m (3rd)    o (5th)    + (root)    M (3rd)    m (5th)

7

o (root)    + (3rd)    M (5th)    m (root)    o (3rd)    + (5th)

13

M (root)    m (3rd)    o (5th)    + (root)    M (3rd)    m (5th)

19

o (root)    + (3rd)    M (5th)    m (root)    o (3rd)    + (5th)

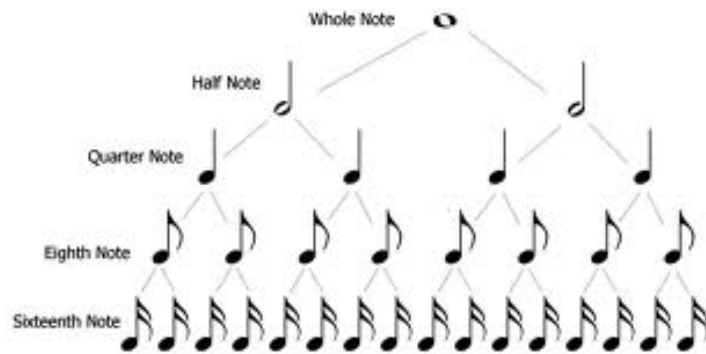


## Lesson Six: Note and Rest Values

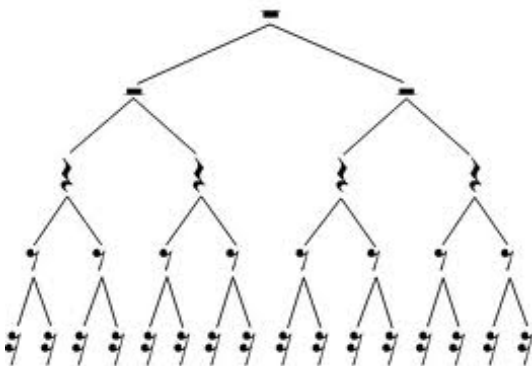
The names of the most common note and rest values are shown in the following chart:  
Notice the line/space placement of the whole rest and the half rest.

| Rest Description   | Rest Image | Note Description   | Note Image |
|--------------------|------------|--------------------|------------|
| whole rest         |            | whole note         |            |
| half rest          |            | half note          |            |
| quarter rest       |            | quarter note       |            |
| eighth rest        |            | eighth note        |            |
| sixteenth rest     |            | sixteenth note     |            |
| thirty-second rest |            | thirty-second note |            |

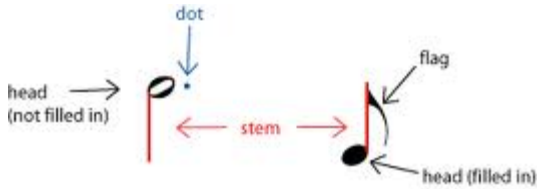
The following chart shows the basic note values and how they compare to each other:



The following chart shows the basic rest values and how they compare to each other:



The following terms are used to describe the different parts of the note:



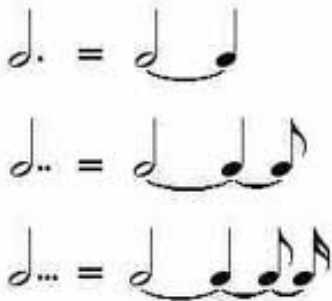
The dot on a note adds half the value of the note or dot that precedes it.

When notated on the staff, a dot is never placed on a staff line. If the notehead lies on a staff line, then the dot should be placed to the right of the note in the space above the note.

If a half note gets 2 beats, then a dotted half note will equal 3 beats (2+1)

If a half note gets 2 beats, then a doubly dotted half note will equal 3 1/2 beats (2+1+1/2)

If a half note gets 2 beats, then a triply dotted half note will equal 3 3/4 beats (2+1+1/2 +1/4)



A double whole note (American) or a breve (international) is a note that is equal to two whole notes, or a rest that is equal to two whole rests.



You should be familiar with the following tempo terms:

Grave (solemn)

Largo (broad)

Lento (slow)

Adagio (slow)

Andante (moderately slow)

Moderato (moderate)

Allegretto (moderately fast)

Allegro (fast)

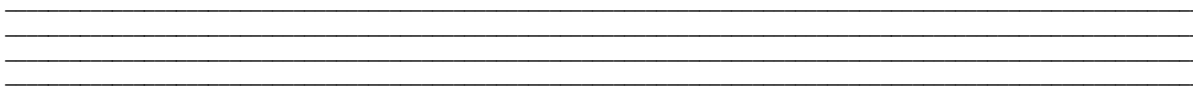
Vivace (lively)

Presto (very fast)

**Lesson Six: Note and Rest Values**  
**Practice Questions**

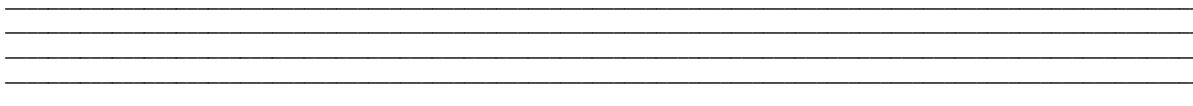
1) Write the following rhythms on the staff below:

breve note, whole note, half note, quarter note, eighth note, 2 eighth notes beamed together, sixteenth note, 2 sixteenth notes beamed together, thirty-second note, 2 thirty-second notes beamed together



2) Write the following rests of the staff below:

breve rest, whole rest, half rest, quarter rest, eighth rest, sixteenth rest, thirty-second rest



3) What a single rhythm in each blank that equals the sum of the given rhythms:

3 quarters + 4 eighths + 3 sixteenths + 2 thirty-seconds = \_\_\_\_\_

2 thirty-seconds + 1 sixteenth + 2 eighths + 2 dotted eighths = \_\_\_\_\_

1 dotted quarter + 1 dotted eighth + 4 sixteenths + 6 thirty-seconds = \_\_\_\_\_

4) Complete each measure with one note that compliments the given pitches in the melody.  
(Answers may vary, and feel free to be creative)



## Lesson Seven: Rhythm and Meter

**Time signature (meter)**—two numerical numbers, one above the other, at the beginning of a composition (which can be changed throughout the work) used to designate the number of beats in each grouping (the top number or numerator) and the division of the beat (the bottom number or denominator). The top number is often thought of as representing how many beats are in a measure, and the bottom number is often thought of as representing what note gets the beat.

The time signature always follows the key signature, which always follows the clef. If you ever forget the order, just remember that they are in alphabetical order: clef—key—time (CKT), or clef—key—meter (CKM).

**Duple**—meters with two beats per measure

**Triple**—meters with three beats per measure

**Quadruple**—meters with four beats per measure

**Simple meters**—meters in which the beat is divisible by two.

| Type             | Common |        |        | Uncommon |         |
|------------------|--------|--------|--------|----------|---------|
| Simple Duple     | 2<br>2 | 2<br>4 |        | 2<br>8   | 2<br>16 |
| Simple Triple    | 3<br>2 | 3<br>4 | 3<br>8 |          | 3<br>16 |
| Simple Quadruple | 4<br>2 | 4<br>4 | 4<br>8 |          | 4<br>16 |

**Compound meters**—meters in which the beat is divisible by three.

### Compound Time Signatures

| Type               | Common  |         |          |
|--------------------|---------|---------|----------|
| Compound Duple     | 6<br>4  | 6<br>8  | 6<br>16  |
| Compound Triple    | 9<br>4  | 9<br>8  | 9<br>16  |
| Compound Quadruple | 12<br>4 | 12<br>8 | 12<br>16 |

The terms duple, triple, and quadruple in compound meters refer to the fact that these meters often have the dotted pulse as the beat rather than the actual number that appears on the bottom of the meter as the beat. The following example illustrates a measure of 6/8 time. While the top number generally represents how many beats there are in a measure, the top number in compound time is generally a dotted note value that represents the sum of three bottom-number rhythms. Three eighth notes combine to make 1 dotted quarter note beat in 6/8 time, and since there are 2 of those groupings in one measure, this meter is referred to as a duple meter.

Usually counted  
in "two." →

1 2 3 4 5 6

The decision on what note value gets the “beat” or “pulse” (or conducted) in compound time is determined by the tempo. If the tempo is slow then the bottom note (the eighth note in 6/8 time) would get the beat, and if the tempo is fast then the dotted note (the dotted quarter note in 6/8 time) would get the beat.

Rhythms are often grouped or beamed together to reflect what note value gets the beat. While both 6/8 time and 3/4 time both have a total of 6 eighth notes in each measure, the decision regarding which meter to use depends on how the eighth notes are grouped. For example, if there were three groups of two eighth notes each that are beamed together, then that would indicate a 3/4 meter, and if there were two groups of three eighth notes each that are beamed together, then that would indicate a 6/8 meter (as shown in mm. 2 and 6).

## Lesson Seven: Rhythm and Meter Practice Questions

1) Write in a meter for each line that best reflects the rhythmic notation.

5

9

13

2) Write in bar lines to reflect the meter of 4/4 time.

3) Write in bar lines to reflect the meter of 6/8 time.

4) Rewrite the last four measures of number 1 above so that it reflects 12/4 time.

## Lesson Eight: Musicianship

### EAR TRAINING EXERCISES:

**Interval Recognition**—this exercise strengthens your ability to identify various intervals both melodically (itches sounded successively) and harmonically (itches sounded simultaneously).

It is helpful that you associate one song for each simple interval both ascending and descending. Use the first two pitches from the opening or significant section of a song. The following chart lists familiar songs for every simple interval ascending and descending. You should memorize the song that corresponds with each interval ascending and descending. Feel free to use the songs listed or any song that you know well. There are numerous types of songs might be helpful to you when choosing your song: patriotic, childrens, hymns, holiday, classical themes, Broadway, movie, television, jazz standards, pop, rock, jingles, and video games. After you can easily identify intervals using your song aids, you will quickly become proficient in identifying intervals without the use of your song aids.

| <b>Interval:</b>                       | <b>Ascending:</b>   | <b>Descending:</b>   |
|--|---|--|
| <b>minor 2<sup>nd</sup></b>            | Ode to Joy ( <i>Symphony No. 9</i> —Beethoven)<br><u>Theme from Jaws (Williams)</u>                       | Joy to the World (Mason/Handel)<br><u>Für Elise (Beethoven)</u>                            |
| <b>Major 2<sup>nd</sup></b>            | Happy Birthday (Hill)<br><u>Silent Night (Gruber)</u>   | Mary Had a Little Lamb (Mason)<br><u>Three Blind Mice (trad.)</u>                          |
| <b>minor 3<sup>rd</sup></b>            | Lullaby (Brahms)<br><u>Greensleeves/What Child is This (trad.)</u>  | The Star-Spangled Banner (Smith)<br><u>Frosty the Snowman (Rollins)</u>                    |
| <b>Major 3<sup>rd</sup></b>            | When the Saints Go Marching In (trad.)<br><u>U. S. Marine Corps Hymn (Offenbach)</u>                      | Summertime ( <i>Porgy &amp; Bess</i> )<br><u>My Old Kentucky Home (Foster)</u>             |
| <b>Perfect 4<sup>th</sup></b>          | Here Comes the Bride ( <i>Lohengrin</i> —Wagner)<br><u>Amazing Grace (folk hymn)</u>                      | Old MacDonald Had a Farm (folk)<br><u>Hallelujah Chorus (<i>Messiah</i>)</u>               |
| <b>+4<sup>th</sup>/o5<sup>th</sup></b> | Maria ( <i>West Side Story</i> —Bernstein)<br><u>Theme from <i>The Simpsons</i> (Elfman)</u>              | Blue Seven (Sonny Rollins)<br><u>YYZ (instrumental by Rush)</u>                            |
| <b>Perfect 5<sup>th</sup></b>          | Twinkle Twinkle Little Star (trad.)<br><u>Theme from <i>Star Wars</i> (Williams)</u>                      | Theme from <i>Superman</i> (Williams)<br><u>Theme from <i>The Flintstones</i> (Curtin)</u> |
| <b>minor 6<sup>th</sup></b>            | Morning of the Carnival ( <i>Black Orpheus</i> )<br><u>Last Midnight (<i>Into the Woods</i>—Sondheim)</u> | Where Do I Begin (Love Story)<br><u>Please Don't Talk About Me</u>                         |
| <b>Major 6<sup>th</sup></b>            | NBC Theme Song<br><u>My Bonnie Lies Over the Ocean (folk song)</u>  | Nobody Knows the Trouble<br><u>Music of the Night (<i>Phantom</i>)</u>                     |
| <b>minor 7<sup>th</sup></b>            | Somewhere ( <i>West Side Story</i> —Bernstein)<br><u>Theme from <i>Star Trek</i> (Courage)</u>            | An American in Paris (Gershwin)<br><u>Something Wonderful (<i>The King &amp; I</i>)</u>    |
| <b>Major 7<sup>th</sup></b>            | Theme from <i>Fantasy Island</i> (Rosenthal)<br><u>Bali Hai (<i>South Pacific</i>—Rogers)</u>             | I Love You (Porter)<br><u>Back in Your Own Backyard</u>                                    |
| <b>Perfect 8<sup>ve</sup></b>          | Somewhere Over the Rainbow (Arlen)<br><u>Chestnuts Roasting on an Open Fire (Torme)</u>                   | There's No Business Like Show B.<br><u>Willow Weep for Me (Ronell)</u>                     |

**HELPFUL HINT:** Your goal is to be able to **immediately** (without thinking) identify and sing all simple intervals, both ascending and descending. This is the key to having a positive and successful experience in your college musicianship classes.

**Chord Recognition**—this exercise strengthens your ability to identify the quality of various chord structures in both arpeggiated (pitches sounded successively) and block chord fashions (pitches sounded simultaneously). You should be able to identify and sing (as arpeggios) the four basic triad types: major, minor, diminished, and augmented.

**Melodic Error Detection**—this exercise strengthens your ability to detect and correct any discrepancies (both pitches and rhythms) between a melody that is heard and a melody that is written on the staff.

**Melodic Dictation**—this exercise strengthens your ability to dictate a performed melody (both pitches and rhythms) on a musical staff.

**Rhythmic Error Detection**—this exercise strengthens your ability to detect and correct any discrepancies between rhythms that are heard and rhythms that are written within a given meter on the staff.

**Rhythmic Dictation**—this exercise strengthens your ability to dictate a performed series of rhythms within a given meter.

**Harmonic Dictation**—this exercise strengthens your ability to dictate a performed harmonic progression on a musical staff using Roman numeral notation. You should be able to dictate the soprano and bass lines of the chord progression as well.

### **SIGHT SINGING:**

Solfège (solfeccio) is a singing technique that is used in many college and university programs to teach sight singing. There are two methods of applying solfège: fixed do and movable do. Moveable do is the more commonly used method in most American colleges and universities. The solfège syllables for a major scale are do, re, me, sol, la, ti, do. The solfège syllables for a natural minor scale are do, re, me, fa, sol, le, te, do.



When beginning to learn solfège, you should start practicing with melodies that are diatonic (in the key) and scalar. You should be proficient with melodies that focus on just a few pitches, particularly the first 3 or 5 notes of the scale, before progressing to melodies that involve skips and leaps.



**Lesson One: Musical Symbols**  
**ANSWERS to Practice Questions**

1)

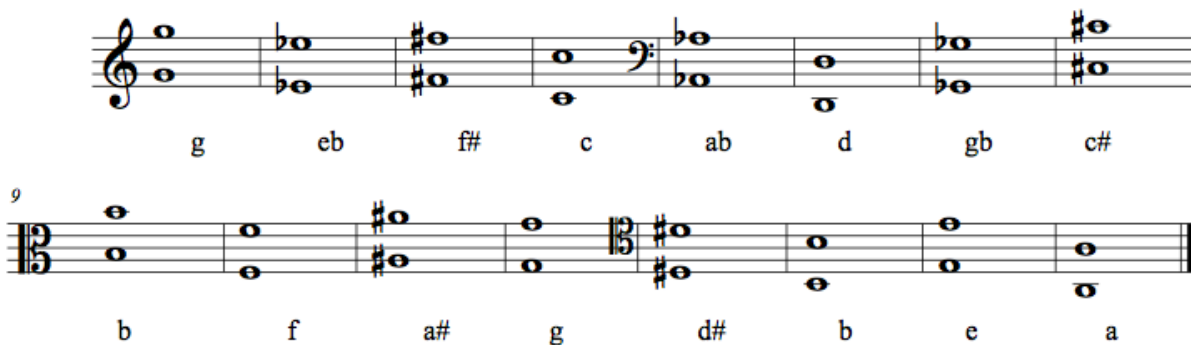


2)



3) Treble clef: d, g, e, c; Bass clef: b e f a; Alto clef: g, b, d, d; Tenor clef: a, g, b, a

4)



**Lesson Two: Key Signatures & Scale Degree Names**  
**ANSWERS to Practice Questions**

- 1) Bb Eb Ab Db Gb Cb Fb
- 2) F# C# G# D# A# E# B#
- 3) Ab Major
- 4) g# minor
- 5) C# Major
- 6) eb minor
- 7) Cb Major
- 8) Gb Major

**Lesson Two: Key Signatures & Scale Degree Names**  
**ANSWERS to Practice Questions cont.**

- 9) 1 sharp: G Major/e minor  
 1 flat: F Major/d minor  
 2 sharps: D Major/b minor  
 3 flats: Eb Major/c minor  
 4 sharps: E Major/c# minor  
 4 flats: Ab Major/f minor  
 2 flats: Bb Major/g minor  
 3 sharps: A Major/f# minor

10)

The image shows two staves of musical notation. The first staff is in treble clef and contains four boxes, each representing a key signature: D Major (one sharp), Eb Major (three flats), c# minor (three sharps), and bb minor (four flats). The second staff is in bass clef and contains four boxes: F# Major (two sharps), Ab Major (four flats), g minor (two flats), and E Major (zero sharps/flats).

D Major                  Eb Major                  c# minor                  bb minor

5

F# Major                  Ab Major                  g minor                  E Major

- 11) tonic, supertonic, mediant, subdominant, dominant, submediant, leading tone/subtonic

**Lesson Three: Major and Minor Scales**  
**ANSWERS to Practice Questions**

1)

The image shows five staves of musical notation, each representing a different scale. Staff 1: D Major scale in treble clef. Staff 2: F natural minor scale in treble clef. Staff 3: B harmonic minor scale in bass clef. Staff 4: D# harmonic minor scale in bass clef. Staff 5: Ab melodic minor scale in bass clef.

D Major

F natural minor

B harmonic minor

D# harmonic minor

Ab melodic minor

**Lesson Three: Major and Minor Scales**  
**ANSWERS to Practice Questions cont.**

- 2) F# Major: A#, E#  
 Eb harmonic minor: Gb, D  
 Ab Major: Db, G  
 B melodic minor: C#, G#, A, C#  
 G# natural minor: A#, D#

- 3) G#  
 4) E  
 5) E#  
 6) A  
 7) F

**Lesson Four: Intervals**  
**ANSWERS to Practice Questions**

- 1) Treble Clef: P5 m3 m7 +4 M6 P4 M2 o7  
 Bass Clef: M3 +5 P5 M7 m6 o5 m2 P8  
 Alto Clef: +6 m7 m3 P4 P5 o3 M7 +2  
 Tenor Clef: o4 M3 +7 P8 o2 P4 m7 P5

2)

Interval exercises in four clefs:

- Treble Clef (Staff 1):** m3, P4, M7, P5, +6, o5, +7, M3
- Bass Clef (Staff 2):** +5, m2, m7, o4, m6, M7, m3, P8
- Alto Clef (Staff 3):** M3, +4, M6, o7, +5, m2, +8, M7
- Tenor Clef (Staff 4):** +2, m3, P4, +6, P5, M3, o7, o3

**Lesson Five: Chords (Arpeggios)**  
**ANSWERS to Practice Questions**

- 1) Treble Clef: M m m + M o  
 Bass Clef: M m + o m M  
 Alto Clef: o + m M + m  
 Tenor Clef: m o o m + M

2)

1  
 M (root) m (3rd) o (5th) + (root) M (3rd) m (5th)

7  
 o (root) + (3rd) M (5th) m (root) o (3rd) + (5th)

13  
 M (root) m (3rd) o (5th) + (root) M (3rd) m (5th)

19  
 o (root) + (3rd) M (5th) m (root) o (3rd) + (5th)

**Lesson Six: Note and Rest Values**  
**ANSWERS to Practice Questions**

1)

2)

