

# Primo Theory

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**Level 10**

by

Robert Centeno

# How to Use This Book

This is a unique workbook. From these pages, the student can directly access learning materials available on the internet with the simple swipe of a mobile device. The revised Primo Music Theory Series now offers this interactive capability in all grade levels. These online supplementary materials include interactive web applications, walkthroughs, videos, and downloadable exercises. This workbook series utilizes the advantages of modern technology to enhance and accelerate the student's learning experience.

## The Ear-Training Exercises

There are various ear-training exercises provided in the appendix which can be practiced with the teacher or by the student alone. These exercises largely consist of singing drills aimed at sharpening the listening skills of the student. The teacher should first work with the student on these exercises until the student becomes familiar with the procedures. Afterward, the teacher should periodically observe as the student performs them to ensure that the student is maintaining correct practice. The student may discontinue any exercise that can be executed easily.

## The Dictation Exercises

The rhythmic and melodic dictation exercises are designed so that the student can work through them alone using interactive web applications or work through them with the teacher playing the dictation melodies. The teacher can fill in the missing measures with materials of his or her choice or use the materials provided at [www.primotheory.com](http://www.primotheory.com).

## The QR Codes

The QR codes found throughout this series can only be read using a smart mobile device which has a QR code reader app installed. If you don't have a QR code reader and don't know how to get one, follow these instructions:

Step 1: With your mobile device, open your app marketplace (App Store, Google Marketplace, etc.).

Step 2: Search for "QR reader" and download and install any one of the apps available. You can choose between free or paid versions. Do a bit of research to decide which app is best for you. Once installed, it's ready to go.

Step 3: To scan a QR code, activate the app and center the QR code in the viewfinder as if you are going to take a picture of it. Adjust the distance if necessary. Some code readers will scan the code automatically when it's in view.

If you are still unsure what to do, go to the [www.primotheory.com](http://www.primotheory.com) "Help" page or email [info@primopublishing.com](mailto:info@primopublishing.com).

## Online Resources

Throughout the text of this series you will find directions given as follows:

[primotheory.com](http://primotheory.com) → Resources → Level 7 → Page 10

This means to go to the website "primotheory.com," where you will be taken to a page containing a "Resources" link. From there, follow the links—click on "Resources," which will take you to a menu with all the volume levels; click on "Level 7," which will take you to a page listing Level 7 resources by page number; finally, click on "Page 10" to find the desired resource. But please note that, while this workbook cannot continue to grow once printed, the resources found online will continue to grow. All added resources will be listed with references to the workbook page numbers.

Be sure to visit [www.primotheory.com](http://www.primotheory.com) to find links to an ever-growing list of supplemental materials for each level.

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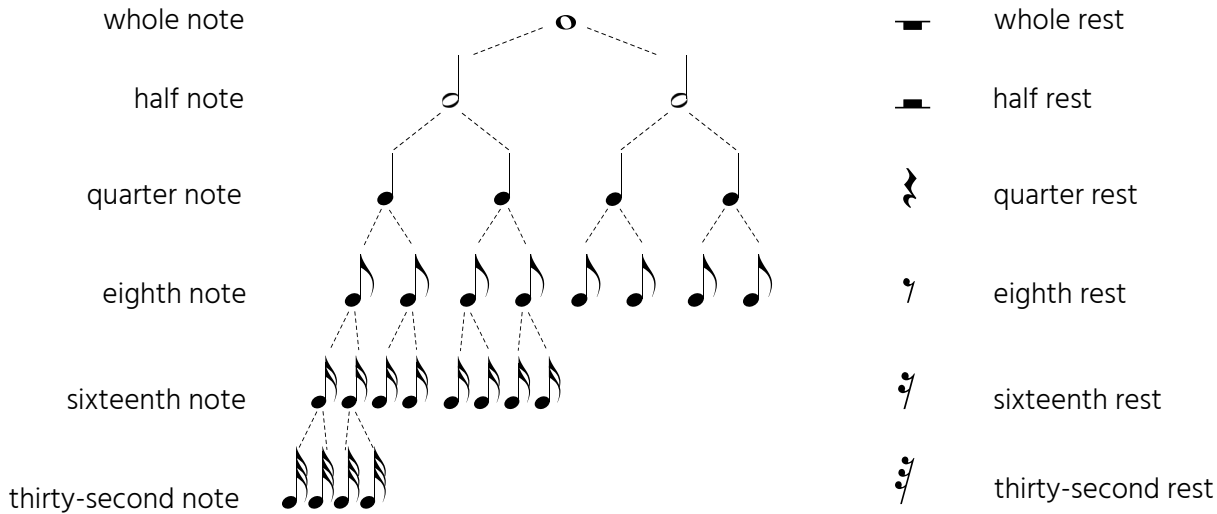
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## Section 1

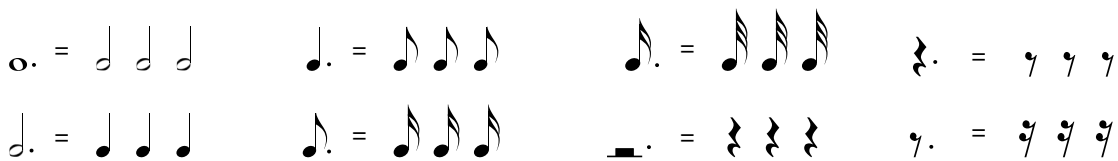
## Rhythm and Meter

## Note and Rest Values

The graphic below shows a hierarchy of note values. Each note or rest divides naturally into two equal parts called **divisions**. The whole note divides into two half notes, the half note divides into two quarter notes, and so on. Rests are divided the same way.



A dot placed after a note or rest increases the length of the note or rest by one-half of its original value. A dotted note or rest can divide into three equal parts.



① Write the correct number on each blank.

A note equals \_\_\_\_\_ notes.

A note equals \_\_\_\_\_ notes.

A note equals \_\_\_\_\_ notes.

A note equals \_\_\_\_\_ notes.

A note equals \_\_\_\_\_ notes.

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A note equals \_\_\_\_\_ notes.

A note equals \_\_\_\_\_ notes.

## Compound Time Signatures: $\frac{6}{8}$ and $\frac{9}{8}$

In compound time signatures such as  $\frac{6}{8}$  and  $\frac{9}{8}$ , the basic beat is naturally divisible by three. The dotted quarter note is usually perceived as the beat, which is divided into three eighth notes.

The numbers of the compound time signature are usually interpreted differently:

The **upper number** does not directly indicate the number of beats per measure.

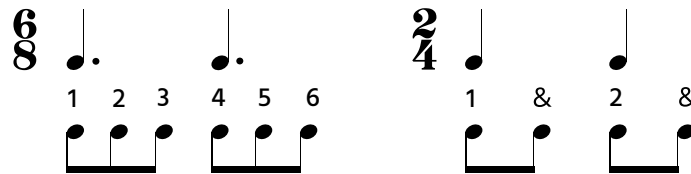
To find the number of beats per measure, divide the upper number by three.

$$\frac{6}{8} \div 3 = 2 \text{ beats per measure} \qquad \frac{9}{8} \div 3 = 3 \text{ beats per measure}$$

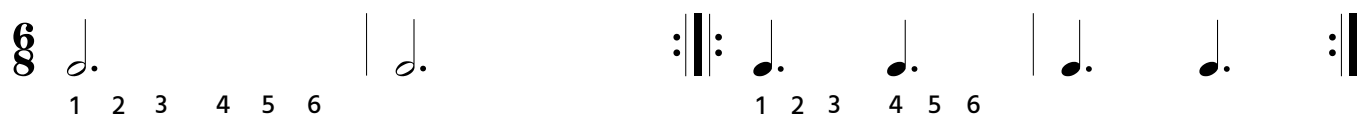
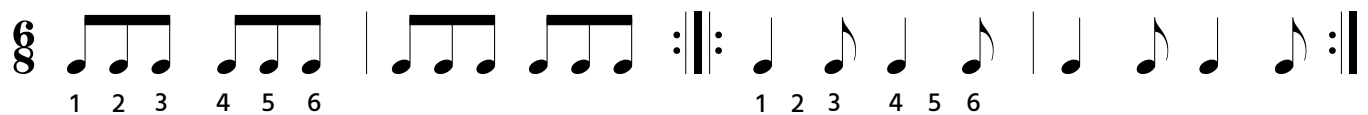
The **lower number** represents the largest possible division of the beat.

$\frac{6}{8}$   $\frac{9}{8}$  The eighth note  is the division of the beat.

Compare  $\frac{6}{8}$  and  $\frac{2}{4}$  time:



② Clap the rhythms as you count aloud. Practice each group until you can clap and count at a steady pace.



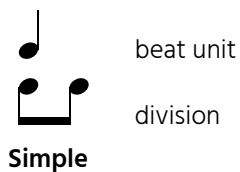
## Simple and Compound Time

There are two basic types of beat divisions:

In **simple time**, the beat is divided into two equal parts.

The top number of a time signature in simple time is 2, 3, or 4.

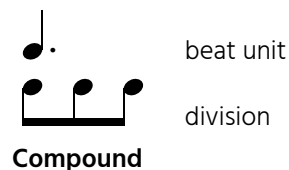
Examples:  $\square \frac{2}{4} \quad \frac{3}{4} \quad \frac{4}{4} \quad \frac{2}{2}$



In **compound time**, the beat is divided into three equal parts.

The top number of a time signature in compound time is 6, 9, or 12.

Examples:  $\square \frac{6}{8} \quad \frac{9}{8} \quad \frac{12}{8} \quad \frac{6}{4}$



In compound time, the numbers of the time signature are usually interpreted differently than those of the simple time signature.

The **upper number** of a compound time signature does not directly indicate the number of beats per measure. To find the number of beats per measure, divide the upper number by three.

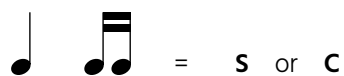
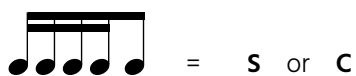
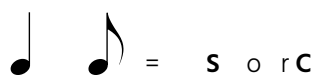
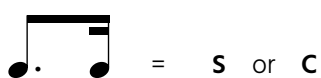
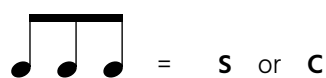
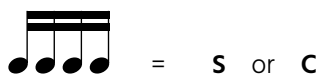
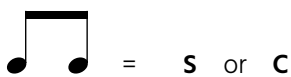
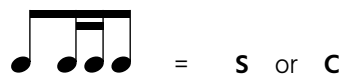
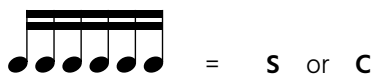
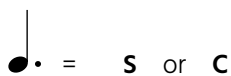
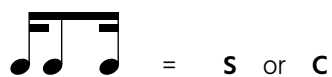
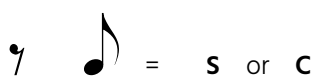
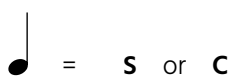
$$\frac{6}{8} \div 3 = 2 \text{ beats per measure with the } \text{♩} \cdot \text{ note as the beat.}$$

The **lower number** of a compound time signature represents the largest possible division of the beat.

$$\frac{6}{8} \quad \text{The eighth note } \text{♪} \text{ is the division of the beat.}$$

③ Each example represents one beat.

Circle the correct description: simple (S) or compound (C) time.



**Meter** refers to the pattern of strong and weak beats in a measure.  
Every time signature indicates a certain pattern of strong and weak beats.

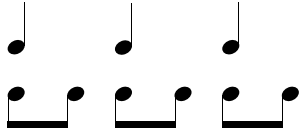
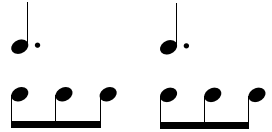
*Duple meter* has two beats per measure; one strong beat and one weak beat.

*Triple meter* has three beats per measure; one strong beat and two weak beats.

*Quadruple meter* has four beats per measure; two duple meter patterns with the first and third beat as the strong beats.

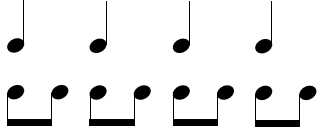
<b>Duple Meter</b>	<b>Triple Meter</b>	<b>Quadruple Meter</b>
$\frac{2}{4}$ 1 2	$\frac{3}{4}$ 1 2 3	$\frac{4}{4}$ 1 2 3 4
strong weak	strong weak weak	STRONGEST weak strong weak
		┌ duple ┐ ┌ duple ┐

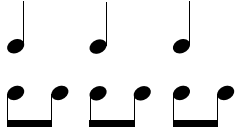
The combination of meter and beat divisions is shown here:

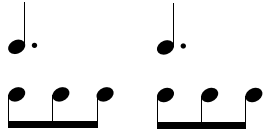
$\frac{3}{4}$  <p>beat unit divided by 2 Simple time</p> <p>1 2 3</p> <p><b>Triple meter</b></p>	$\frac{6}{8}$  <p>beat unit divided by 3 Compound time</p> <p>1 2</p> <p><b>Duple meter</b></p>
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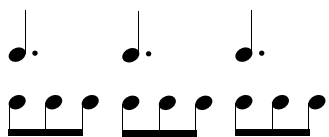
**Asymmetrical meter** is a combination of duple and triple patterns which create an irregular pulse, such as *quintuple meter* (five beats per measure) or *septuple meter* (seven beats per measure). Two common asymmetrical meters are those with 5 or 7 as the top number. Examples:  $\frac{5}{4}$   $\frac{7}{8}$

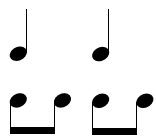
④ Write the correct answer on each blank.

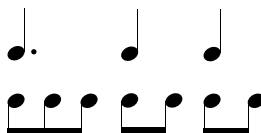
$\frac{4}{4}$ 	Duple (D), triple (T), quadruple (Q), or asymmetrical meter (A)? _____
	Simple (S) or compound (C) time? _____

$\frac{3}{4}$ 	Duple (D), triple (T), quadruple (Q), or asymmetrical meter (A)? _____
	Simple (S) or compound (C) time? _____

















$\frac{6}{8}$ 	Duple (D), triple (T), quadruple (Q), or asymmetrical meter (A)? _____
	Simple (S) or compound (C) time? _____

$\frac{9}{8}$   Duple (**D**), triple (**T**), quadruple (**Q**), or asymmetrical meter (**A**)? \_\_\_\_\_  
 Simple (**S**) or compound (**C**) time? \_\_\_\_\_

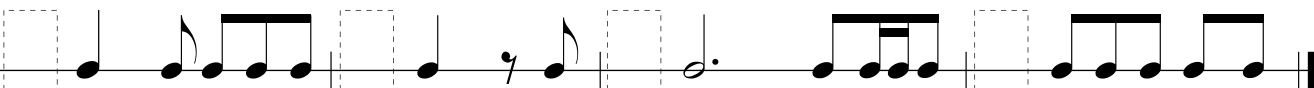
$\frac{2}{4}$   Duple (**D**), triple (**T**), quadruple (**Q**), or asymmetrical meter (**A**)? \_\_\_\_\_  
 Simple (**S**) or compound (**C**) time? \_\_\_\_\_

$\frac{7}{8}$   Duple (**D**), triple (**T**), quadruple (**Q**), or asymmetrical meter (**A**)? \_\_\_\_\_

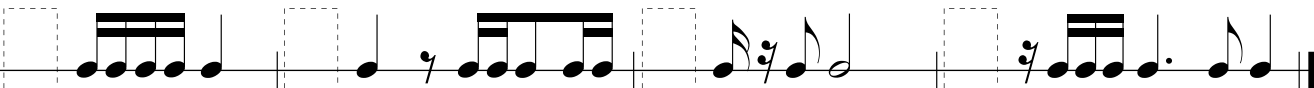
⑤ Write the correct number on each blank.

A  rest equals _____  rests.	A  rest equals _____  rests.
A  rest equals _____  rests.	An  rest equals _____  rests.
A  rest equals _____  rests.	A  rest equals _____  rests.
A  rest equals _____  rests.	A  rest equals _____  rests.


⑥ At the beginning of each measure, write the correct time signature.  
 The measures are written in **simple** time, **compound** time or **asymmetrical** meter.



Compound      Simple      Compound      Asymmetrical



Simple      Compound      Simple      Simple



Simple      Compound      Simple



## Section 2 Scales and Keys

The **major scale** is a series of eight successive tones arranged in the following ascending order of whole steps (**W**) and half steps (**H**):

1 2 3 4 5 6 7 8 (1)

tonic

C Major: W W H W W W H

The tone that begins and names the scale—the first scale degree—is called the **tonic** or **keynote**.

The sharps or flats in a key signature will always appear in the same order known as the **order of sharps** and the **order of flats**.

Order of Sharps

F C G D A E B

Order of Flats

B E A D G C F

### Major SHARP Key Signatures

To name a major key with sharps in the key signature:

- Find the last sharp of the signature.
- Go up a **diatonic** half step from the last sharp to find the tonic (keynote).\*

E (tonic)

E Major

### Major FLAT Key Signatures

For key signatures with flats, the next-to-last flat in the key signature names the tonic.

Ab-(tonic)

Ab Major

- Name the major key for each key signature. Use abbreviations (e.g. A Maj, Bb Maj).

\_\_\_\_\_

\_\_\_\_\_

\* A diatonic half step is a half step which consists of two neighboring letter names.

## The Relative Minor

Every major key has a relative minor key which uses the same key signature.

The sixth scale degree of the major scale is the same as the tonic of the relative minor key.

C major and A minor are **relative keys** because they share the same key signature.

### Another way to find the relative minor key:

From the tonic of a major key, go down three half steps to find the tonic of its relative minor.

For example:

② For each key signature, name the relative major and minor keys.

Use uppercase letters for major and lowercase letters for minor (e.g. G Maj, e min).

Major: \_\_\_\_\_

minor: \_\_\_\_\_

Major: \_\_\_\_\_

minor: \_\_\_\_\_

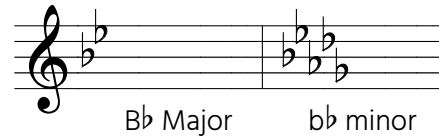


## Parallel Major and Minor Keys

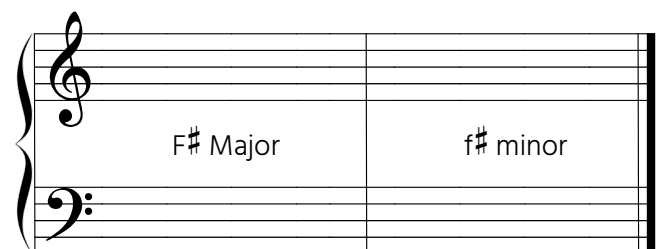
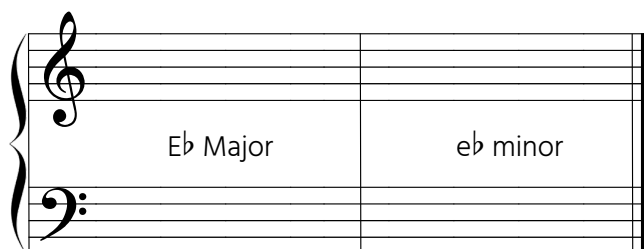
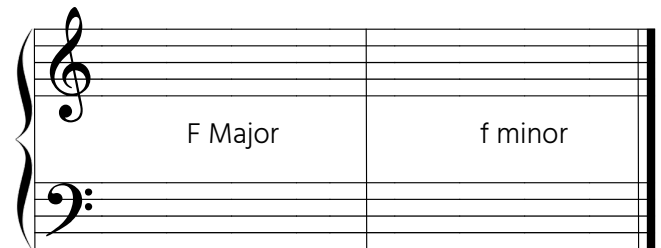
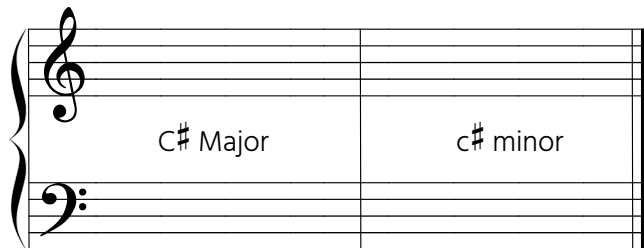
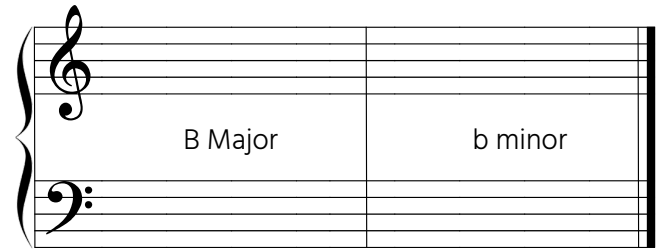
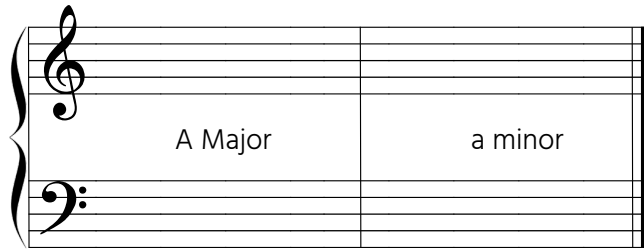
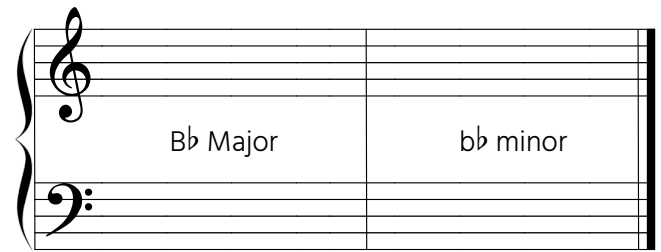
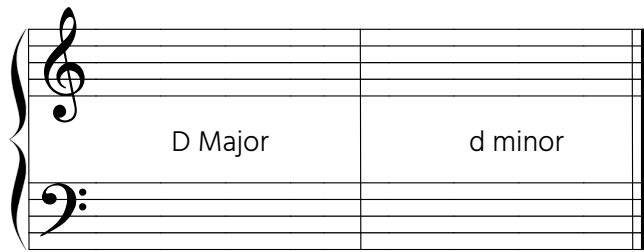
Parallel keys are the major and minor keys that share the same tonic, or keynote. For example, C major is the parallel major of C minor.

Parallel keys do not share the same key signature.

Examples of parallel major and minor key signatures:

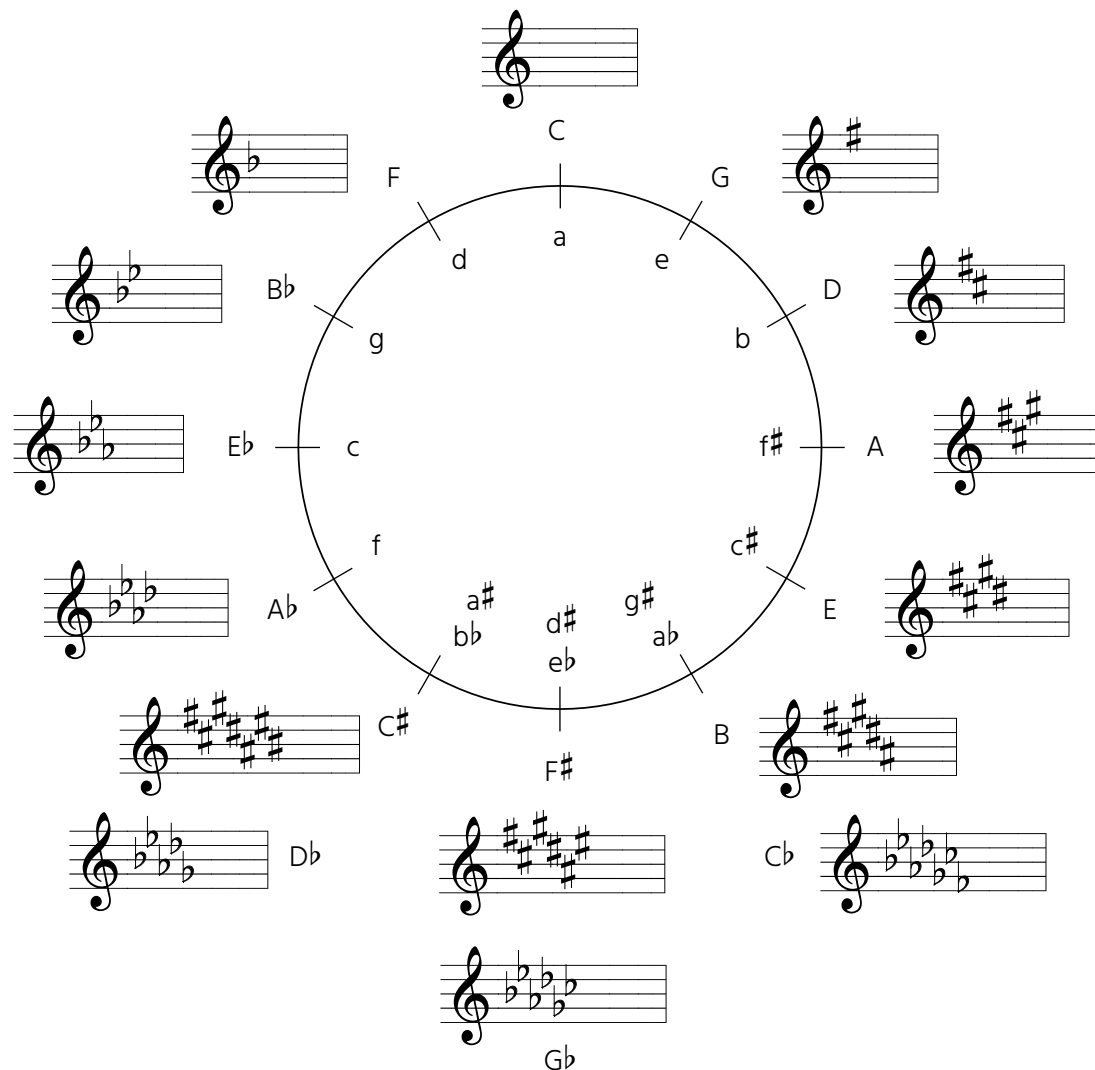


③ Draw the key signatures for the parallel major and minor keys.



# The Circle of Fifths

The **Circle of Fifths** is a schematic representation used to illustrate the relationships among various key signatures and the major and minor keys associated with them. In the illustration below, the major keys are represented by the uppercase letters outside the circle (C, B $\flat$ , etc.). The minor keys are represented by the lowercase letters inside the circle (a, f $\sharp$ , etc.).



Moving **clockwise** around the circle of fifths, notice that: (1) sharps are added to the key signature one at a time; and (2) each new key begins a **perfect 5th higher** than the previous key.

Moving **counterclockwise** around the circle of fifths, notice that: (1) flats are added to the key signature one at a time; and (2) each new key begins a **perfect 5th lower** than the previous key.

Some sharp and flat keys will overlap at the bottom of the circle. These keys share the same tonic tone spelled as a sharp and as a flat. These are called **enharmonic keys**.

# The Minor Scales

There are three basic forms of minor scale: natural, harmonic, and melodic.

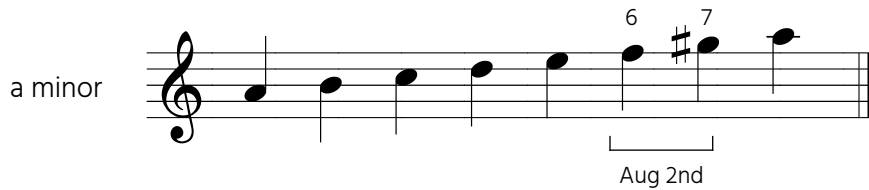
## Natural Minor Scale

- Whole step/half step pattern: **W H W W H W W**
- No altered tones—follows its key signature
- Keeps the same form whether ascending or descending



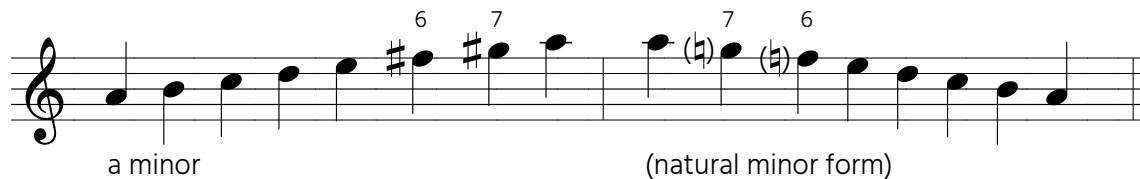
## Harmonic Minor Scale

- The seventh scale degree is raised a half step—accidentals are used
- An augmented 2nd (three half steps) occurs between scale degrees 6 and 7
- Keeps the same form whether ascending or descending

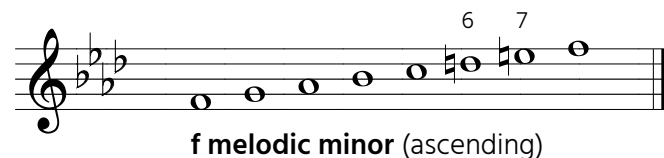


## Melodic Minor Scale

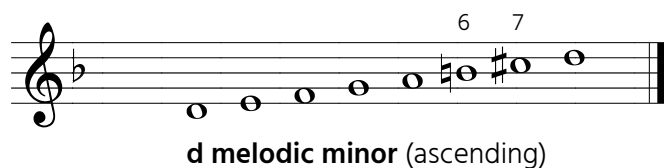
- When ascending, scale degrees 6 and 7 are raised a half step—accidentals are used
- When descending, the scale reverts to the natural minor form



**Important note:** When altering the 6th or 7th scale degrees, natural signs are used when raising flatted notes a half step.

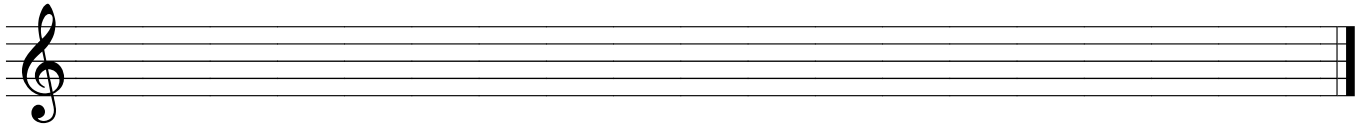


Some ascending melodic minor scales will have a natural sign and a sharp sign.

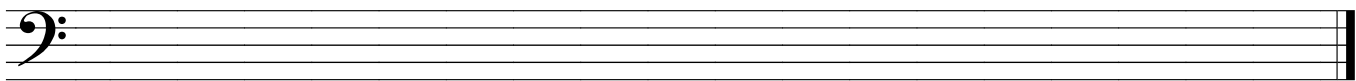


- ④ On each staff, write the key signature for the minor scale named above the staff.  
Write the named minor scale. Add accidentals as needed.

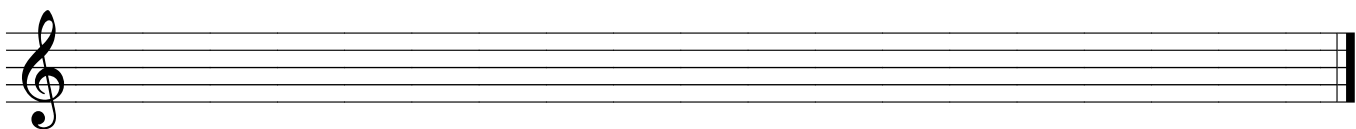
**e natural minor**



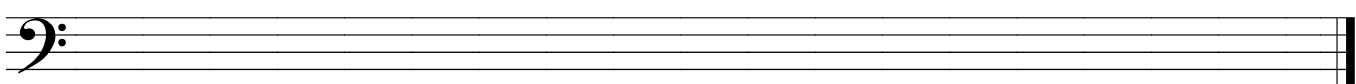
**g natural minor**



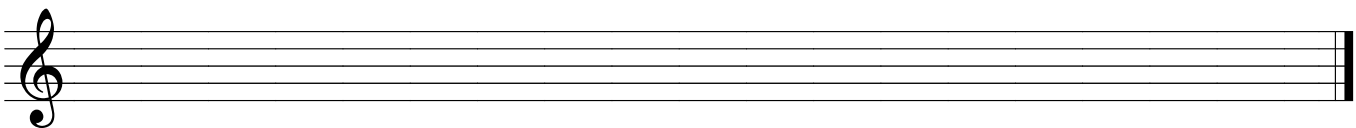
**f# harmonic minor**



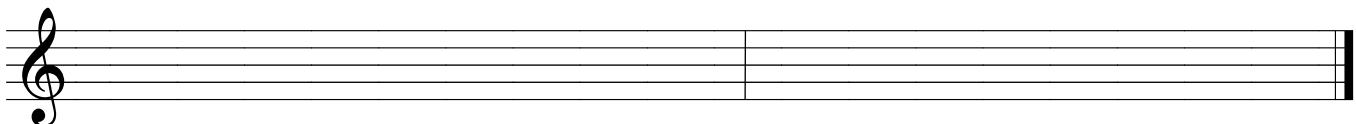
**b harmonic minor**



**e<sup>b</sup> harmonic minor**



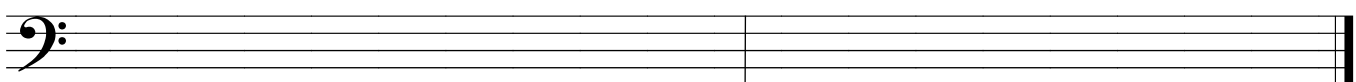
**d melodic minor**



(ascending)

(descending)

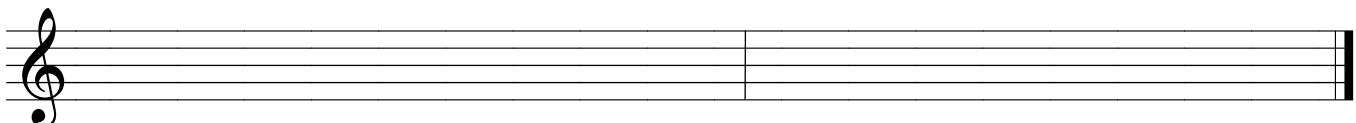
**c melodic minor**



(ascending)

(descending)

**b melodic minor**



(ascending)

(descending)



## Section 3 Intervals

An **interval** is the distance in pitch between two tones. Intervals are classified by *type* and *size*.

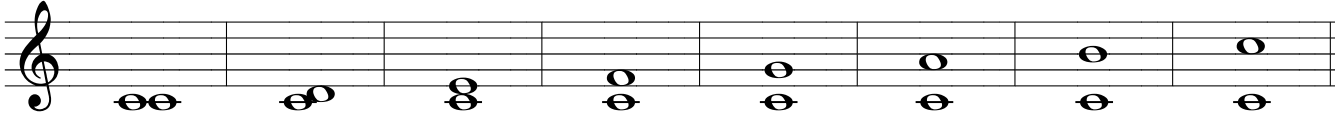
The following abbreviations are sometimes used when describing the *type* of intervals:

perfect (**Per**), major (**Maj**), minor (**min**), augmented (**Aug**), and diminished (**dim**).

Intervals of an octave or less are called **simple intervals**.

### Major and Perfect Intervals

Intervals built above the tonic tone of a major scale are either major intervals or perfect intervals.

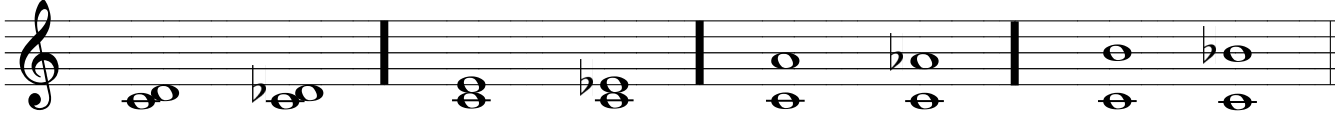


A musical staff in treble clef showing intervals from unison to octave. The notes are: C1-C2, C2-D2, D2-E2, E2-F2, F2-G2, G2-A2, A2-B2, B2-C3.

<b>type:</b>	Per	Maj	Maj	Per	Per	Maj	Maj	Per
<b>size:</b>	Prime (Unison)	2nd	3rd	4th	5th	6th	7th	8ve

### Major and Minor Intervals

A major interval becomes a minor interval when decreased in size by a half step.

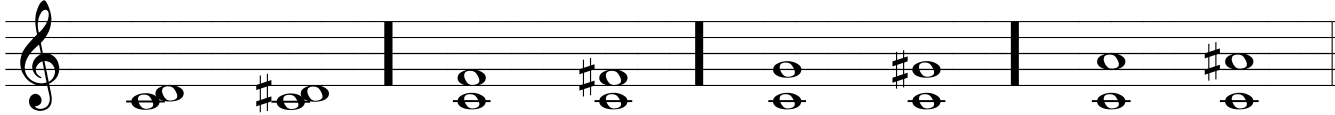


A musical staff in treble clef showing major and minor intervals from 2nd to 7th. The notes are: C-D, C-B, D-E, D-F, E-F, E-G, F-G, F-A, G-A, G-B.

Maj 2nd	min 2nd	Maj 3rd	min 3rd	Maj 6th	min 6th	Maj 7th	min 7th
---------	---------	---------	---------	---------	---------	---------	---------

### Augmented Intervals

Perfect and major intervals become augmented when increased in size by a half step.

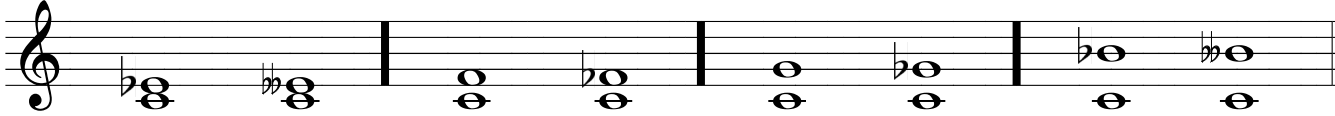


A musical staff in treble clef showing augmented intervals from 2nd to 6th. The notes are: C-D#, C-E, D-E#, D-F#, E-F#, E-G#, F-G#, F-A#.

Maj 2nd	Aug 2nd	Per 4th	Aug 4th*	Per 5th	Aug 5th	Maj 6th	Aug 6th
---------	---------	---------	----------	---------	---------	---------	---------

### Diminished Intervals

Perfect and minor intervals become diminished when decreased in size by a half step.



A musical staff in treble clef showing diminished intervals from 3rd to 7th. The notes are: Bb-A, Bbb-A, C-D, Cbb-D, D-E, Dbb-E, E-F, Ebb-F, F-G, Fbb-G.

min 3rd	dim 3rd	Per 4th	dim 4th	Per 5th	dim 5th	min 7th	dim 7th
---------	---------	---------	---------	---------	---------	---------	---------

\*The augmented 4th or diminished 5th is also called a *tritone*.



**How to build an interval above a given note:**

You already know to use the major scale to find perfect and major intervals, and that you can alter these intervals to find minor, augmented, and diminished intervals. This works well when you are working with keys that are familiar to you—just think of the bottom note as tonic and apply the appropriate accidentals according to the key signature. However, when the ‘tonic’ tone calls for keys that are not familiar, you can find any interval easily if you know the following three intervals very well: the **perfect 5th**, **major 3rd**, and **major 2nd**. You can use these intervals to piece together other less familiar intervals.

The perfect 5th is the easiest to recognize on the staff:

no accidentals    only sharps    only flats

The exception to this is the perfect 5th starting on B and B $\flat$ .

The perfect 4th follows a similar pattern:

no accidentals    only sharps    only flats

The exception to this is the perfect 4th starting on F $\sharp$  and F.

The major 2nd should always be spelled as a diatonic whole step; the two tones should be spelled as two consecutive letters of the alphabet.

diatonic whole steps                      INCORRECT spelling

You can combine the perfect 5th and major 2nd to find the perfect 4th or the major 6th.

Perfect 4th?    Start with a perfect 5th, then go a major 2nd down from the top note.    P5\*    M2 down    =    Perfect 4th

Major 6th?    Start with a perfect 5th, then go a major 2nd up from the top note.    P5    M2 up    =    Major 6th

\*At times, abbreviations will be used to indicate major and perfect intervals. For example, “M2” or “Maj 2nd” indicates a major 2nd, “P4” or “Per 4th” indicates a perfect 4th, and so on.

① Construct the named intervals **above** the given notes. Use whole notes.

Per 5th    Maj 6th    Per 4th    Per 5th    Maj 6th    Per 4th    Maj 6th    Per 4th

Per 5th    Maj 6th    Per 4th    Per 5th    Maj 6th    Per 4th    Per 5th    Per 5th

Maj 6th    Aug 6th    min 6th    Maj 7th    min 7th    dim 7th    Maj 3rd    Aug 3rd

Maj 3rd    min 3rd    dim 3rd    Maj 3rd    min 3rd    dim 3rd    min 7th    dim 7th



② Identify the intervals by type and size. Use abbreviations (e.g. dim 3rd, Aug 6th).

\_\_\_\_\_

Watch the clef!

\_\_\_\_\_

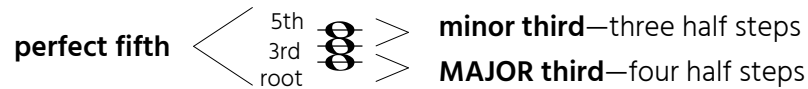
\_\_\_\_\_

\_\_\_\_\_

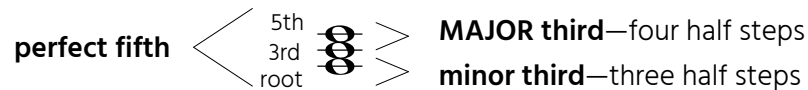
## Section 4 Chords

A **chord** is made up of three or more different tones sounded simultaneously. Chords may be implied when the tones are sounded one at a time (broken chord). A **triad** is a type of chord that has only three tones stacked in thirds (skips).

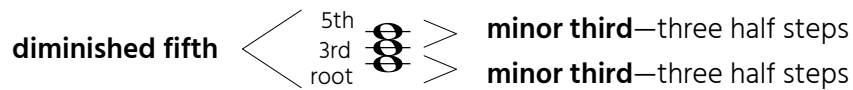
The **MAJOR triad** contains a major third with a minor third stacked above it. The distance from the root to the 5th of the triad is a perfect fifth.



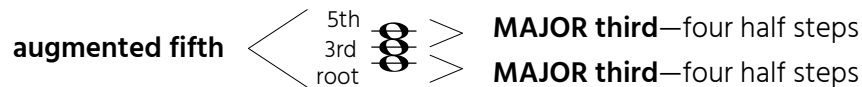
The **MINOR triad** contains a minor third with a major third stacked above it. The distance from the root to the 5th of the triad is a perfect fifth.



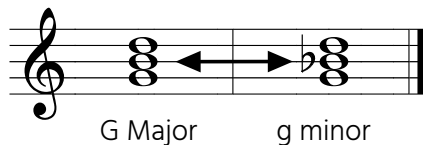
The **DIMINISHED triad** consists of two minor thirds. The distance from the root to the 5th of the triad is a diminished fifth.



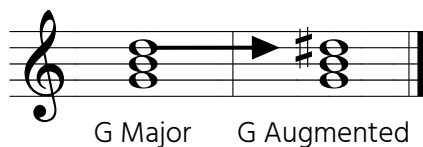
The **AUGMENTED triad** consists of two major thirds. The distance from the root to the 5th of the triad is an augmented fifth.



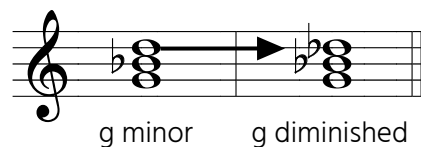
The difference between a major and minor triad is found in the 3rd of the chord.



Raise the 5th of a major chord to form an augmented chord.



Lower the 5th of a minor chord to form a diminished chord.



① Build the triad indicated on each note.

Maj\* Aug min dim Maj Aug min dim

Maj Aug min dim Maj Aug min dim

Maj Aug min dim Maj Aug min dim

Maj Aug min dim

Note the clef! Double sharps and double flats will be needed in some of the following triads.

Maj Aug min dim Maj Aug min dim

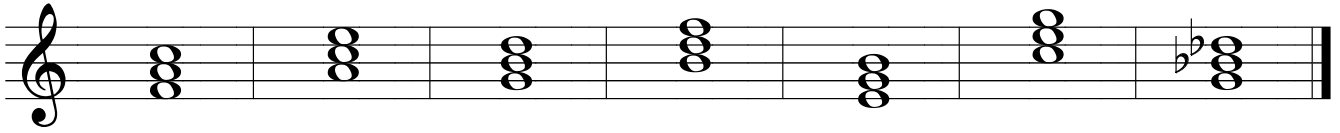
Maj Aug min dim Maj Aug min dim

Maj Aug min dim Maj Aug min dim

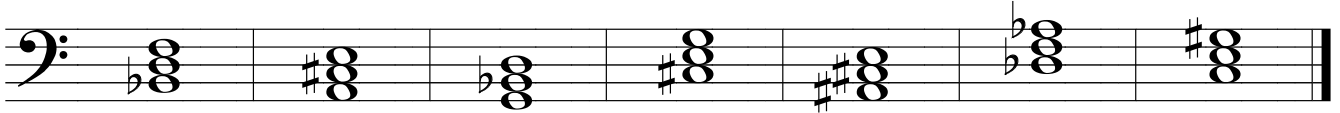
Maj Aug min dim Maj Aug min dim

\* Abbreviations will sometimes be used to indicate chord types: "Maj" for major, "min" for minor, "Aug" for augmented, and "dim" for diminished.

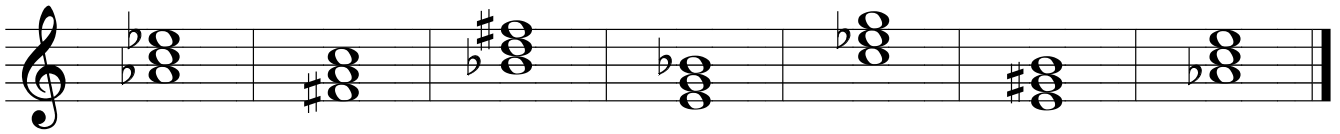
② Identify the following triads by name and type. Use abbreviations (e.g. E Maj, e $\flat$  min).



\_\_\_\_\_



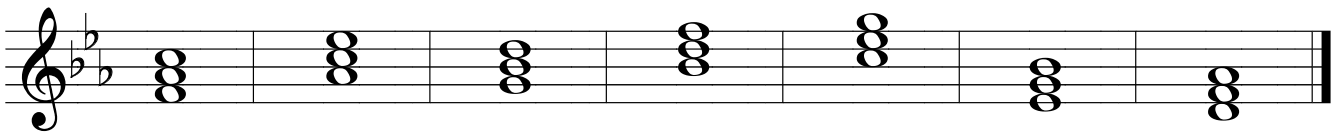
\_\_\_\_\_



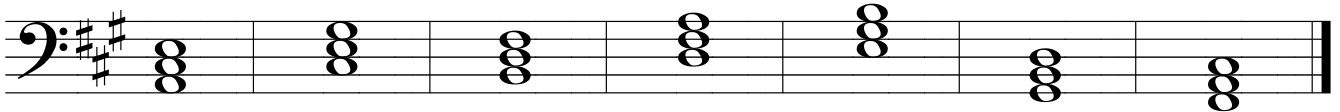
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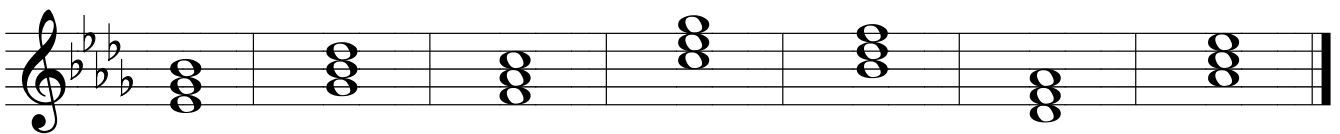
③ Identify the following triads by name and type. Note the key signature for each line.



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

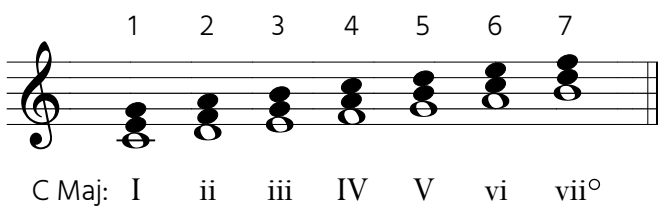
## Roman Numeral Analysis

A **diatonic scale** is a seven-note scale made up of five whole steps and two half steps for each octave. The standard major and minor scale are examples of diatonic scales. A chord may be built on any tone of the major or minor scale.

When analyzing the chord of a major or minor key, **roman numerals** are used to identify: (1) the scale degree the chord is built on, and (2) the quality of the chord. Uppercase roman numerals are used for major and augmented chords; lowercase roman numerals are used for minor and diminished chords.

- Major chord—uppercase roman numeral (I, V)
- Minor chord—lowercase roman numeral (i, iv)
- Augmented chord—uppercase roman numeral with “+” sign (III+)
- Diminished chord—lowercase roman numeral with “°” sign (vii°)

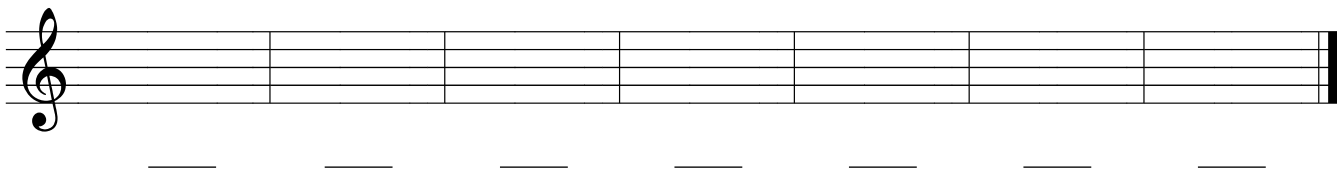
The triads formed by the **major** scale:



C Maj: I    ii    iii    IV    V    vi    vii°

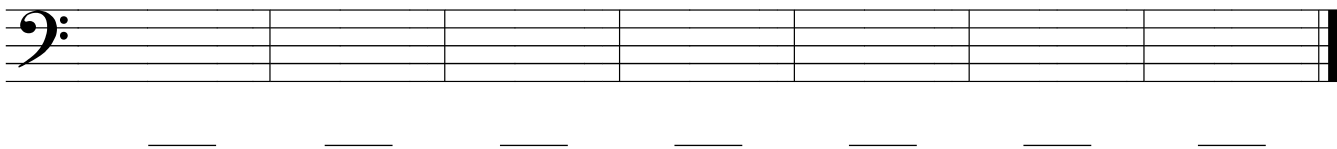
- ④ On each staff below:
- Write the **major** key signature (the key is given).
  - Write an ascending scale, one scale note per measure.
  - On each note of the scale, construct a triad (root position).
  - Label each triad with a roman numeral.

### D Major



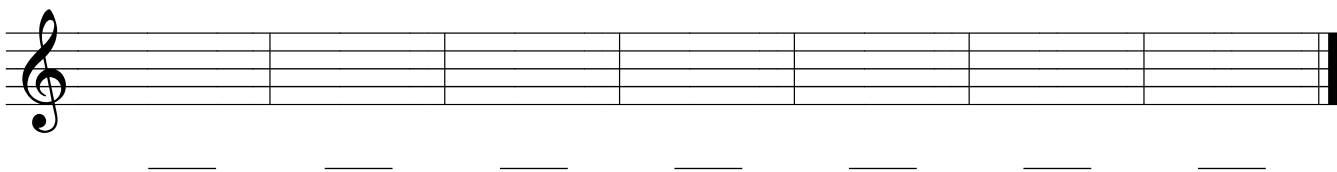
\_\_\_\_\_

### G Major



\_\_\_\_\_

### E<sup>b</sup> Major



\_\_\_\_\_

In minor keys, the roman numerals vary according to the form of minor. The triads formed by the **harmonic minor** scale are shown here.

a min: i ii° III+ iv V VI vii°

- ⑤ On each staff below:
- Write the **minor** key signature (the key is given).
  - Write an ascending scale, one scale note per measure.
  - On each note of the scale, construct a triad in root position.
  - Label each triad with the appropriate roman numeral.

**d harmonic minor**

\_\_\_\_\_

**f# harmonic minor**

\_\_\_\_\_

**c harmonic minor**

\_\_\_\_\_

**Major and Minor Keys**

- ⑥ In each measure, the major or minor key is given.  
Write the triad represented by each roman numeral.

B $\flat$  Maj: ii E Maj: IV c min: iv D Maj: V

G Maj: I f min: III+ B Maj: vi d min: ii° A Maj: iii





### Shorthand for Key Indications

From time to time, major and minor keys will be indicated by the following shorthand: a single uppercase letter plus a colon to indicate a major key; a single lowercase letter plus a colon to indicate a minor key. For example:

"C:" (also, "C Maj:") for C Major, or "c:" (also, "c min:") for c minor.

- ⑨ The key of each exercise is given. Write the correct roman numeral for each chord. If the chord is inverted, include the appropriate arabic numeral(s).

#### C Major

\_\_\_\_\_

#### e minor

\_\_\_\_\_

#### B $\flat$ Major

\_\_\_\_\_

- ⑩ In each measure a chord and key are given. Write the roman numeral for each chord and, if applicable, the arabic numeral(s) indicating the inversion.

E $\flat$ : vi<sup>4</sup>      A: \_\_\_\_\_      A $\flat$ : \_\_\_\_\_      E: \_\_\_\_\_      C: \_\_\_\_\_      G: \_\_\_\_\_

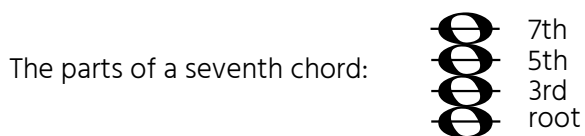
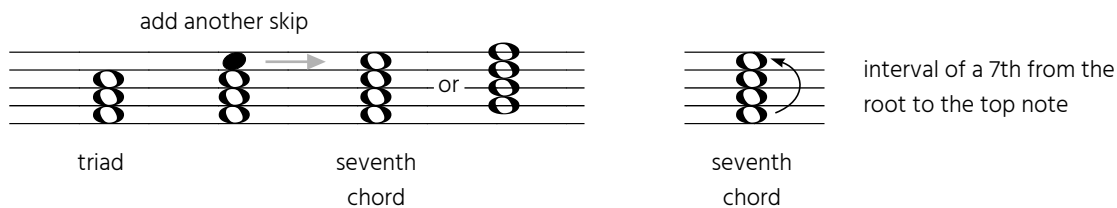
b: \_\_\_\_\_      d: \_\_\_\_\_      g $\sharp$ : \_\_\_\_\_      g: \_\_\_\_\_      e: \_\_\_\_\_      a: \_\_\_\_\_

B $\flat$ : \_\_\_\_\_      D: \_\_\_\_\_      F: \_\_\_\_\_      F $\sharp$ : \_\_\_\_\_      D $\flat$ : \_\_\_\_\_      C $\sharp$ : \_\_\_\_\_

## The Seventh Chord

A seventh chord is a triad with an additional tone added a seventh above the root.

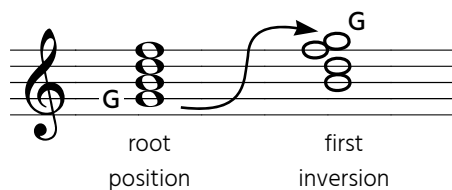
On the staff, a basic root position seventh chord will appear as four notes stacked in thirds.



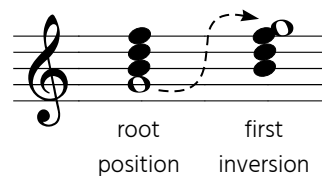
## Inversions of the Seventh Chord

Seventh chords can be arranged in root position and *three* inversions.

**First Inversion**  
3rd in the bass



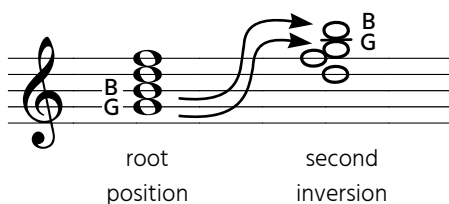
visual aid:



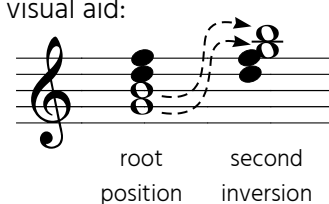
⑪ Write the first inversion of each seventh chord given.

first inversion                      first inversion                      first inversion                      first inversion

**Second Inversion**  
5th in the bass



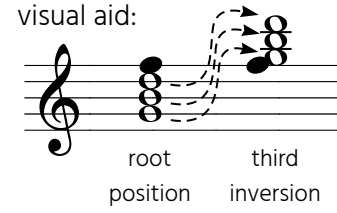
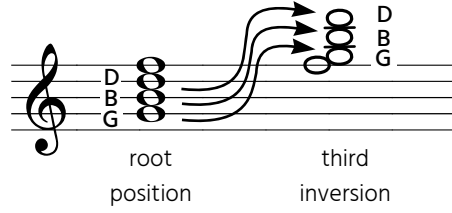
visual aid:



⑫ Write the second inversion of each seventh chord given.

second inversion                      second inversion                      second inversion                      second inversion

**Third Inversion**  
7th in the bass



13 Write the third inversion of each seventh chord given.

third inversion      third inversion      third inversion      third inversion

14 Each arrow is pointing to the **root, 3rd, 5th,** or **7th** of each chord. Write the correct choice.

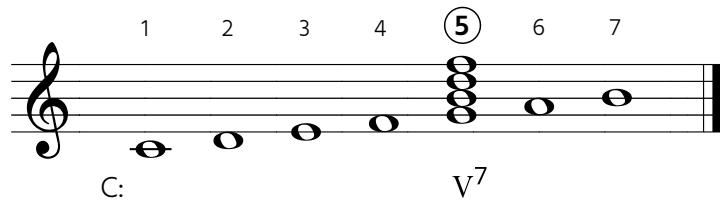
\_\_\_\_\_

15 For each example: a) Construct a 7th chord from the given note.  
b) Write the indicated inversion of that chord in the second measure.

 first inversion	 second inversion	 third inversion
 third inversion	 first inversion	 second inversion
 second inversion	 third inversion	 first inversion

## The Dominant Seventh Chord (V7)

The dominant seventh chord is a seventh chord constructed on the fifth scale degree of a major or minor scale. It is a major triad with a minor 7th above the root. All seventh chords in root position are indicated by the number '7' placed to the right of a roman numeral.



- To write a V7 chord, follow these steps:
- Identify the key.
  - Find the fifth scale degree.
  - Construct a seventh chord on the fifth scale degree.
  - In minor keys, raise the 3rd of the seventh chord (scale degree 7) one half step.

- 16) For each **major** key signature, write the key name in the blank. Use uppercase letters.  
In each measure, write the V7 chord in root position.

Exercise 16: Major key signatures. The first measure of the treble staff has a key signature of one flat and a chord of F major with a V7 chord symbol below it. The other measures have key signatures of two sharps, one flat, and one sharp, with blank lines for the V7 chord symbol below each measure.

- 17) For each **minor** key signature, write the key name in the blank. Use lowercase letters.  
In each measure, write the V7 chord in root position.

**NOTE:** an accidental (# or ♭) will be needed for every chord.

Exercise 17: Minor key signatures. The first measure of the treble staff has a key signature of two sharps and a chord of B minor with a V7 chord symbol below it. The other measures have key signatures of one flat, one sharp, two sharps, and one flat, with blank lines for the V7 chord symbol below each measure.

## Seventh Chord Inversions and Arabic Numerals

When arabic numerals are used to indicate seventh chord inversions, they represent the interval of the chord notes above the bass in the most compressed possible version of the chord. As is the case with inversions of normal triads, not all of the intervals are given—only those necessary to identify the inversion.

	<b>root position</b>	<b>first inversion</b>	<b>second inversion</b>	<b>third inversion</b>
C:	V <sup>7</sup>	V <sub>6</sub> <sub>5</sub>	V <sub>4</sub> <sub>3</sub>	V <sub>2</sub>

⑱ The major or minor key is given for each line. Write the root position V<sup>7</sup> chord in the first measure. Write the three inversions in the remaining measures.

	<b>root position</b>	<b>first inversion</b>	<b>second inversion</b>	<b>third inversion</b>
	V <sup>7</sup>	V <sub>6</sub> <sub>5</sub>	V <sub>4</sub> <sub>3</sub>	V <sub>2</sub>

**f# minor**

**A<sup>b</sup> Major**

**e minor**

**B<sup>b</sup> Major**

**b minor**

## REVIEW: Section 4

- ① Write a root position triad on each note. Abbreviations are given for the triad type.

Maj      Aug      min      dim      Maj      min      Aug

- ② Identify the following triads by name and type. Use abbreviations (e.g. E Maj, e $\flat$  min).

\_\_\_\_\_

- ③ Identify the following triads by name and type. Use abbreviations. **Note the key signature.**

\_\_\_\_\_

- ④ In each measure, the major or minor key signature is given.  
Write the triad represented by each roman numeral.

F Maj:    ii      A Maj:    IV      g min:    iv      e min:    V      C Maj:    V

- ⑤ In each measure, a major or minor key and a diatonic triad is given.  
Write the roman numeral of each triad.

B $\flat$  Maj:    \_\_\_\_\_      E Maj:    \_\_\_\_\_      c min:    \_\_\_\_\_      D Maj:    \_\_\_\_\_      a min:    \_\_\_\_\_

- ⑥ In each measure, write the named triad in root position, first inversion, and second inversion.

**D Major**                      **b minor**                      **d $\sharp$  diminished**

root      first      second  
position    inversion    inversion

- ⑦ The chords in the following exercise are found in the key of A minor. Identify each chord with a roman numeral. If the chord is inverted, include the appropriate arabic numeral(s).

**a minor**

\_\_\_\_\_

- ⑧ In each measure a major or minor key is given. Below each chord, write the roman numeral and, if applicable, the arabic numeral(s) indicating the inversion.

c: \_\_\_\_\_ f#: \_\_\_\_\_ Ab: \_\_\_\_\_ c#: \_\_\_\_\_ C: \_\_\_\_\_ e: \_\_\_\_\_

- ⑨ For each staff below:
- Name the major or minor key according to the key signature. Use appropriate uppercase and lowercase letters.
  - Write the V7 chord in root position in the first measure.
  - Write the three inversions in the remaining measures.

	root position	first inversion	second inversion	third inversion
_____ Major	V <sup>7</sup>	V <sub>6</sub> <sub>5</sub>	V <sub>4</sub> <sub>3</sub>	V <sub>2</sub>

\_\_\_\_\_ minor

\_\_\_\_\_ Major

\_\_\_\_\_ minor

## Section 5 Harmonic Analysis

**Harmony** is the study of chords—how they are formed, how they interact with each other, and how they interact with other musical elements such as melody, rhythm and form. These various elements combine to express musical ideas and to make musical statements. Our study of harmony will focus on the practice of composers of Western Europe between the years 1600 and 1900. This period encompasses the Baroque, Classical and Romantic periods of music, and is referred to as the *common practice period*.

A **diatonic scale** is a seven-note scale made up of five whole steps and two half steps for each octave. The standard major and minor scale are examples of diatonic scales. A chord may be built on any tone of the major or minor scale.

When analyzing the chord of a major or minor key, **roman numerals** are used to identify: (1) the scale degree the chord is built on, and (2) the quality of the chord. Uppercase roman numerals are used for major and augmented chords; lowercase roman numerals are used for minor and diminished chords.

- Major chord—uppercase roman numeral (I, V)
- Minor chord—lowercase roman numeral (i, iv)
- Augmented chord—uppercase roman numeral with “+” sign (III+)
- Diminished chord—lowercase roman numeral with “°” sign (vii°)

The triads formed by the **major** scale:

1    2    3    4    5    6    7

C Maj: I    ii    iii    IV    V    vi    vii°

### How to Find the Roman Numeral of a Chord

When analyzing a chord on a single staff, use the following checklist to find the roman numeral of that chord. Make it a habit to go down this list in order:

- 1) Identify the key.
- 2) Identify the root of the chord in question. If the chord is inverted, find the root note.
- 3) Identify scale degree of the root note.
- 4) Identify the chord type (major, minor, etc.).

### How to Write Roman Numerals

For uppercase roman numerals, draw a border along the top and bottom — *I III+ IV*

For lowercase roman numerals — *i iii iv vii°*



### Assignment: Analyzing Chord Progressions

- ① Write a roman numeral below each chord. All chords will be in root position.  
 The chords used in these examples are: I, IV, V, ii, or vi.  
 Above each bracket, write **HC** if the two chords form a half cadence; write **AC** if the two chords form an authentic cadence.

**G Major**

**F Major**

**D Major**

**Bb Major**

## Four-Part Writing

The term **four-part harmony** refers to music written in four parts, or voices, each of which retains its identity as a distinct melodic line to some degree. In its simplest form, the voices all move with the same rhythm, such as you would find with a simple church hymn. However, in the more advanced compositions in this style, such as the chorales of J.S. Bach, there is a considerable variety of rhythm and melodic contour among the voices. Such music, which has two or more distinct melodic lines playing a more or less equal role in the creation of the musical expression, is known as **polyphonic music**.

The four parts, from the highest to lowest, are the **soprano, alto, tenor, and bass**.

In four-part harmony, the voices may be arranged on the grand staff in two different ways:

- The bass and tenor are on the bass staff; the alto and soprano are on the treble staff.
- The soprano, alto and tenor are on the treble staff; the bass voice is on the bass staff.

In four-part writing, chords may appear in either open or close harmony, also known as *open position* or *close position*:

**Open harmony**—the distance between the soprano and tenor part is an octave or more.

**Close harmony**—the distance between the soprano and tenor part is less than an octave.

### Shorthand for Key Indications

For the sake of brevity, sometimes major and minor keys will be indicated by the following shorthand: "C Maj:" indicates the key of C major; "c min:" indicates the key of C minor. At times, a symbol such as "C:" indicates the key of C Major ("c:" for minor).

## The Authentic Cadence V–I

The term **authentic cadence** encompasses all varieties of the V–I or V–i progression occurring at the end of a musical unit such as a phrase, section, or composition.

### Voice-Leading Principles for the Authentic Cadence

In four-part harmony, the aim is to create a texture in which each voice forms a distinct melodic line that blends in good harmony with the other voices. The musical and logical progression of each voice from one chord to the next is known as **voice leading**.

The following voice-leading principles should serve as a good starting point when writing and analyzing authentic cadences:

- bass voice proceeds from the root of V to the root of I
- soprano, alto, or tenor repeats the common tone
- soprano, alto, or tenor moves up a step from scale degree 2 to scale degree 3
- soprano, alto, or tenor moves up a step from scale degree 7 (leading tone) to the tonic tone

C Major: V I V I V I V I

The V–I authentic cadence will occur in a variety of voicings. Once the voicing of the V chord is determined, the I chord practically writes itself if you follow the voice-leading principles:

V I

These voice-leading principles will also apply to four-part harmony in **close position** (soprano, alto and tenor on the treble staff; bass voice only on the bass staff):

V I

## The Perfect and Imperfect Authentic Cadence

There are two types of authentic cadence—the *perfect authentic cadence* and the *imperfect authentic cadence*.

The **perfect authentic cadence** is a V–I cadence that must fulfill the following:

- The root of V and I is in the bass
- The tonic tone of the final I chord is in the soprano

The **imperfect authentic cadence** is a V–I cadence that is not considered a perfect authentic cadence because (1) the I or the V chord is NOT in root position, or (2) in the final I chord, the tonic tone is NOT in the soprano.

For the following assignment, all chords will be in root position. So, when determining if an authentic cadence is perfect or imperfect, focus your attention on the soprano voice.

② Complete the **authentic cadences**. The key and chords are identified:

- Write the root of each chord in the bass.
- Write the upper three notes of the I (or i) chord on the treble staff.
- Above each example, indicate whether the cadence is **perfect** or **imperfect**.

Example: *imperfect*

E Maj: V I

a min: V i

b min: V i

C Maj: V I

B $\flat$  Maj: V I

f min: V i

D Maj: V I

F Maj: V I

e min: V i

## The V7-I Authentic Cadence

The basic voice leading for the V7-I cadence:

- (a) The seventh of V7 goes down a step ( $\hat{4}$  resolves to  $\hat{3}$ ).\*
- (b) The fifth of V7 moves down to tonic ( $\hat{2}$  resolves to  $\hat{1}$ ).
- (c) The third of V7 moves up to tonic ( $\hat{7}$  resolves to  $\hat{1}$ ).
- (d) The root of V7 moves to the root of I ( $\hat{5}$  to  $\hat{1}$ ).

C: V7 I      V7 I      V7 I      V7 I

Use the graphic to the right to easily remember the resolution of the V7 chord. Notice that the fifth of the I chord (G) is omitted. This will be discussed in more detail later in this section.

C: V7 I

### Writing the V7-I Authentic Cadence

In Exercises 3–5, you will be asked to write only one note of the I chord for each example. But if you have sufficient understanding to write all the notes of the I chord, then by all means do so.

③ In each example, the top three voices are written on the treble staff (close position):

- a) **Circle the seventh** of the V7 chord (scale degree 4).
- b) Above the roman numeral I, write the **one note** to which the seventh (of V7) resolves. (optional: write all the notes of the I chord.)

C: V7 I

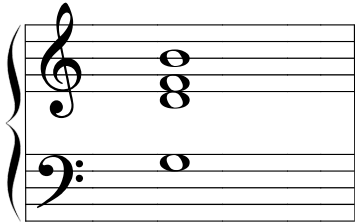
D: V7 I

B $\flat$ : V7 I

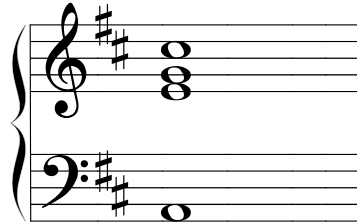
\* Scale degrees will sometimes be represented by a caret symbol “^” on top of a number. For example, “ $\hat{6}$ ” and “scale degree 6” mean the same thing. So, the phrase “scale degrees 6 and 7 are raised” can be expressed as “ $\hat{6}$  and  $\hat{7}$  are raised.”

④ In each example, the top three voices are written on the treble staff:

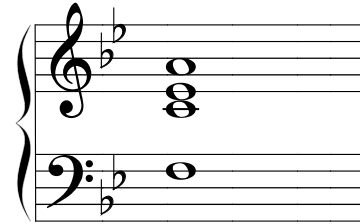
- Circle the **fifth** of the V7 chord (scale degree 2).
- Above the roman numeral I, write the **one note** to which the fifth (of V7) resolves.  
(optional: write all the notes of the I chord.)



C: V7 I



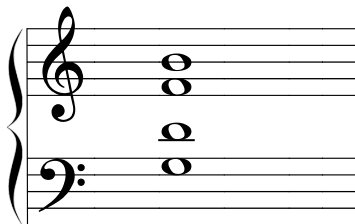
D: V7 I



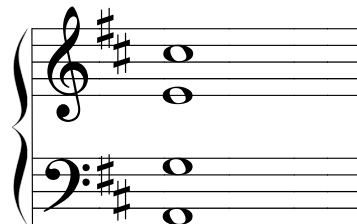
Bb: V7 I

⑤ In each example, the tenor and bass voices are written on the bass staff (open position):

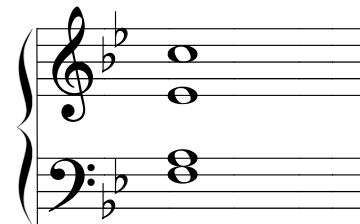
- Circle the **third** of the V7 chord (scale degree 7).
- Above the roman numeral I, write the **one note** to which the third (of V7) resolves.  
(optional: write all the notes of the I chord.)



C: V7 I



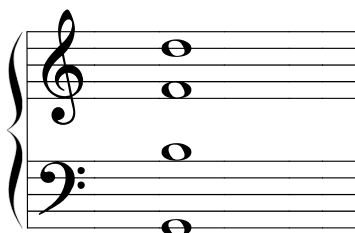
D: V7 I



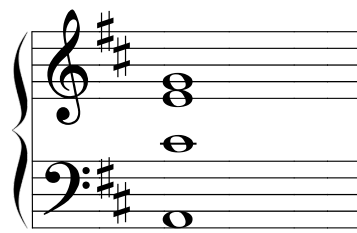
Bb: V7 I

⑥ The tenor and bass voices in these examples are on the bass staff.

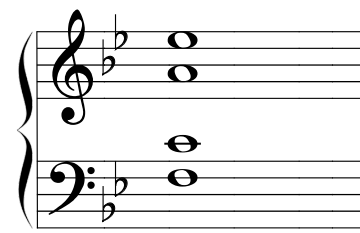
Write **all the notes** of the I chord. Follow the voice-leading procedures.



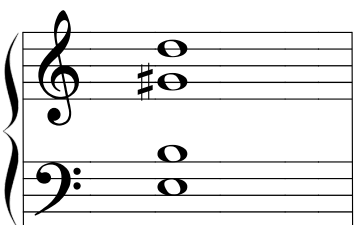
C: V7 I



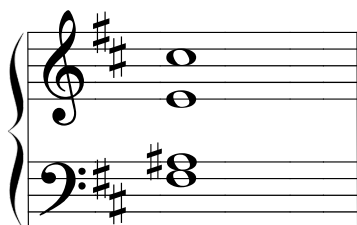
D: V7 I



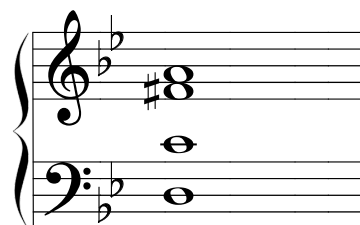
Bb: V7 I



a: V7 i



b: V7 i



g: V7 i

## Voice Leading Exceptions

You might have noticed that, in following the voice-leading procedures outlined, the I chord has no fifth and three tonic notes. This is perfectly acceptable, especially when the leading tone occurs in the soprano.

C: V7 I

In some instances when the leading tone is in the alto or tenor, a unison occurs in the I chord (e), which should be avoided. In these cases, the leading tone (the third of the V7 chord) should move down a skip to the fifth scale degree, as in example (f). This will maintain a four-part texture.

(e) not good (f) GOOD

C: V7 I V7 I

If the root of the V7 chord is doubled, leave out the fifth of the V7 chord (scale degree 2) and repeat the common tone when progressing to I.

no fifth

doubled root

Bb: V7 I

## Writing the V7–I with Alternative Voicing

The following examples are written in close position. Be sure to maintain this when you write your chords. Each key signature has two V7–I cadences. The V7 in each measure is given.

- ⑦ For each example, resolve the V7 chord to the tonic chord. Write all chords in root position.

Ab: V7 I V7 I E: V7 I V7 I

f: V7 i V7 i c#: V7 i V7 i

D: V7 I V7 I c: V7 i V7 i

## The Plagal Cadence

The **Plagal Cadence** is the progression **IV–I** (iv–i for minor). This cadence often follows immediately after an authentic cadence and acts as a means of elaborating or prolonging the tonic chord. This cadence is commonly referred to as the “Amen” cadence because it occurs at the end of hymns in some Christian churches.

The voice-leading rules for the plagal cadence:

- Both chords are in **root position**.
- The root of each chord is doubled.
- The **common tone** is repeated in the same voice.
- The **remaining voices** move down a step.

common tone

C: IV I

⑧ Complete the IV–I plagal cadences below in **close position**.

The key and chords are given. Use proper voice leading.

G: IV I

F: IV I

C: IV I



E: IV I

a: iv i

b: iv i

- ⑨ Complete the plagal cadences below in **open position**.  
The key and chords are given. Use proper voice leading.

c: IV I

Bb: IV I

f: iv i

D: IV I

F: IV I

e: iv i

### Review

- ⑩ Identify each type of cadence by circling the correct answer. The key is given above each example.

Ab Major

(circle one)

- Perfect Authentic Cadence  
Imperfect Authentic Cadence  
Plagal Cadence

c# minor

(circle one)

- Perfect Authentic Cadence  
Imperfect Authentic Cadence  
Plagal Cadence

Eb Major

(circle one)

- Perfect Authentic Cadence  
Imperfect Authentic Cadence  
Plagal Cadence

## The Half Cadence

In the broadest sense, a **half cadence** ends on any chord other than the tonic.

Most half cadences end on the V chord, which can be preceded by any other chord.

Some common half cadences: I–V, i–V, IV–V, iv–V, and ii–V.

Unlike the authentic cadence, which marks a definite end to a phrase, the half cadence ends in a momentary pause and creates a sense that the music will continue (and ultimately end conclusively with an authentic cadence).

### Voice-Leading Rules for the IV–V Half Cadence

- Both chords are in root position.
- The root of each chord is doubled.
- Each of the upper three voices move down to the nearest chord tone of V.

C: IV V

⑪ Complete the IV–V half cadences in **close position**. The key and chords are identified:

- Write the **root** of each chord in the bass.
- Write the upper three notes of the V chord on the treble staff.

G Maj: IV V

b min: iv V

E $\flat$  Maj: IV V

B $\flat$  Maj: IV V

E Maj: IV V

C Maj: IV V

### Voice-Leading Rules for the ii-V Half Cadence

These voice-leading rules apply to the ii-V cadence in a major key:

- Both chords are in root position.
- The root of each chord is doubled.
- Keep the common tone in the same voice, the remaining two voices move up a step.

remaining voices go up a step

common tone

root to root

C: ii V

**Note:** The bass may move up a 4th or down a 5th to the root of the V chord.

- ⑫ Complete the ii-V half cadences in **open position**.  
The key and chords are given. Use proper voice leading.

C: ii V

B $\flat$ : ii V

A $\flat$ : ii V

D: ii V

F: ii V

G: ii V

### Listening Practice

The exercises on pages 58-61 of Appendix I will help the student learn recognize the sound of the authentic cadence, half cadence, and plagal cadence.

## Homophonic Music

Up to this point you have practiced analyzing harmonies arranged as chords, that is, with all the notes sounded at the same time. Sometimes, however, the harmony is expressed with the tones sounding one at a time. A simple example of this is the **arpeggio**, which occurs when you take the tones of a chord and play them as shown:

C Major                      a minor

The arpeggiated figures shown on the top staff can be viewed as elaborations of a simple triad or chord, shown on the bottom staff.

These kind of patterns are most frequently found in homophonic music. In homophonic music, the melodic interest is concentrated in one part, which is supported by arpeggiated chords, solid chords, or other figures which play a subordinate role—in essence, a melody and accompaniment. Compare this to music of the polyphonic style where each part contributes more or less equally in the creation of the musical fabric.

To identify the harmony behind an arpeggiated figure, take inventory of the notes, disregard any duplicates, and arrange them in triad form (stacked in thirds).

- ⑬ On the staff below each arpeggio, write the chord of the arpeggio figure in triad form. Name the chord. Use abbreviations (B Maj, e $\flat$  min, etc.).

⑭ Write the appropriate roman numeral in the blank below each chord.  
Pick from the following: I, i, ii, IV, iv, V, or vi.

**E<sup>b</sup> Major**

\_\_\_\_\_

\_\_\_\_\_

**D Major**

\_\_\_\_\_

**F Major**

\_\_\_\_\_

\_\_\_\_\_

**b minor**

\_\_\_\_\_

## Section 6 Lead Sheet Symbols

In some modern styles of music different symbols are used to identify chords. These symbols are sometimes referred to as **lead sheet** symbols.

The various symbols used for the four basic chord types:

- a) **Major**—upper case letter
- b) **Minor**—uppercase letter followed by any of these symbols: min, mi, m, –
- c) **Diminished**—uppercase letter followed by any of these symbols: dim, °, min ♭5
- d) **Augmented**—uppercase letter followed by any of these symbols: aug, +

	Major		Minor		Diminished		Augmented
a)	<b>F</b>	b)	<b>Fmin</b>	c)	<b>Fdim</b>	d)	<b>F+</b>

(also **Fm** or **F–**)                      (also **Fmin ♭5**)                      (also **Faug**)

All of the two-staff chords shown above are in root position—the lowest note of the chord, given in the bass staff, is the root.

### Chord Inversions Using Lead Sheet Symbols

Chord inversions are indicated by a slash followed by another capital letter that names the bass note. For example, **C/E** indicates a C major chord with an E in the bass (first inversion).

<b>C/E</b>	<b>Gmin/B♭</b>	<b>D♯dim/A</b>	<b>F+/C♯</b>
------------	----------------	----------------	--------------

C major chord with the 3rd of the chord, E, in the bass.                      G minor chord with the 3rd of the chord, B♭, in the bass.                      D♯ diminished chord with the 5th of the chord, A, in the bass.                      F augmented chord with the 5th of the chord, C♯, in the bass.

- ① Write the lead sheet symbol for each chord.

*Cmin*

- ② For each measure, a chord symbol is given:

- On the treble staff, construct a triad as indicated. Use whole notes.
- On the bass staff, draw the correct bass note according to the symbol given.

**G min**      **C# dim/E**      **Bb<sup>+</sup>**      **Eb**      **E/G#**

**Ab**      **Db<sup>+</sup>**      **E dim/Bb**      **B/F#**      **G# min/B**

## The Dominant 7th Chord

In some styles of pop music, the major chord with a minor 7th is often referred to as the *dominant seventh chord*. It is indicated by an uppercase letter denoting the chord followed by the number "7" (e.g. D7). It is called the dominant seventh chord because it is made up of the same intervals as the V7 chord.

In this section we are maintaining a three-voice texture on the treble staff (close position). Since the dominant seventh chord contains four chord tones, one tone will sometimes have to be omitted when constructing the chord on the treble staff. Use the following principles as a guide in determining which chord tone to omit:

- If the chord is in **root position** omit the 5th in the treble staff
- If the chord is **inverted** use the remaining tones of the chord in the treble staff

a) **C7**      b) **C7**

7th   root      7th   5th      7th      5th  
3rd              root      3rd      3rd  
root              root      root      root

root      3rd      5th      7th

- ③ For each measure, write the dominant seventh chord indicated. Try to use a variety of voicings in the treble staff.

**D7      F7      B $\flat$ 7      E $\flat$ 7      A7      F $\sharp$ 7      B7      E7**

- ④ For each measure, write the dominant seventh chord indicated. Try to use a variety of voicings in the treble staff.

**C7/E      G7/F      A $\flat$ 7/E $\flat$       D7/F $\sharp$       F7/E $\flat$       D $\flat$ 7/F      E7/B**



## Section 7                      The Melodic Line

A melody is typically made up of smaller parts known as *melodic units*. The smallest type of melodic unit is the **motive**, or *motif*, which consists of three to eight notes that form a distinct musical idea. A **phrase** is a larger melodic unit, typically four to eight measures in length, which conveys a complete musical thought. Think of a phrase as a complete musical sentence. Two phrases may combine to form a **period**. The motive, phrase, and period are all different types of *form*.

A **cadence** is generally defined as the last two chords of a musical phrase. The cadence functions as musical punctuation—a point of rest, or repose, separating musical phrases.

There are two basic types of cadence. The first type ends on the tonic chord; it closes a phrase with a sense of completion and creates an effect similar to that of a period at the end of a sentence. The second type of cadence ends on a chord other than the tonic; it closes a phrase with the sense that more is to come, that the pause is only momentary. The effect of this type of cadence can be likened to that of a comma.

The term **authentic cadence** encompasses all varieties of the V–I progression occurring at the end of a phrase or composition. Any of the chords may be inverted. In minor keys, the 3rd of the dominant chord—the leading tone—is usually raised a half step, making the dominant chord major.

The authentic cadence is the most common of the cadence types and the most frequently used to end compositions. This is because the V chord contains scale degrees 7 and 2, both of which have a strong tendency to resolve to scale degree 1 (tonic).

A **half cadence** ends on any chord other than the tonic. Most half cadences end on the V chord, which can be preceded by any other chord. Some common half cadences: I–V, IV–V, and ii–V.

Unlike the authentic cadence, which marks a definite end to a phrase, the half cadence ends in a momentary pause and creates a sense that the music will continue.

### The Antecedent and Consequent Phrase in a Melody

The **antecedent phrase**—the ‘question’ phrase—is a phrase which ends on a temporary cadence. The end of this phrase creates an expectation that another phrase will follow. In your writing exercises, the half cadence will be used because it most clearly creates this effect.

The **consequent phrase**—the ‘answer’ phrase—continues after the momentary pause of the first phrase and completes the *period* with a more conclusive ending. The authentic cadence will be used here with the tonic as the last tone in the melody.

In the following section you will compose single-line (monophonic) phrases and melodies employing all the elements just discussed.

## The Melodic Sequence

A *melodic sequence* occurs when a melodic unit is repeated at different pitch levels in a regular ascending or descending pattern.

*Angels We Have Heard on High, French Carol*

In the above example, each recurrence of the motive is a step lower. The motive may ascend or descend at other intervals as well. The motive is generally not repeated more than three times.

### The Antecedent (Question) Phrase: Ending on Dominant Harmony

① For each example given below:

- a) Complete the four-measure phrase ending with a half cadence.
- b) In measure 2, write a **melodic sequence** based on the motive given in measure one.
- c) End the phrase on the **dominant note** (scale degree 5) on a strong beat.\*

**E $\flat$  Major**

**G Major**

**C Major**

**B $\flat$  Major**

\*These phrases may also end on the second scale degree or any member of the dominant chord.

## Rhythmic Imitation

*Rhythmic imitation, or rhythmic repetition,* occurs when a rhythm is repeated but the melodic material does not sequence. For example, the dotted rhythm in (a) is repeated in every measure while the melodic line runs free in no fixed pattern. The rhythmic imitation may involve longer fragments of a few measures each, as shown in (b).

(a)

(b)

### The Consequent (Answer) Phrase: Ending on Tonic Harmony

② For each example given below:

- Complete the four-measure phrase ending with an authentic cadence.
- Use the rhythms given above each staff; do not sequence melodically.
- End the phrase on the **tonic note** on a strong beat.

F Major

G Major

C Major

B $\flat$  Major

## Some General Principles of Melodic Writing

A well-written phrase should strike a balance between the elements of **variety** and **repetition**. The key here is **balance**—if there is too much repetition the result tends toward dullness; if there is too much variety the result might sound like a confused, aimless jumble. So, always aim to balance these two opposing elements in a natural way.

A melody should have a sense of **direction**; it should lead to a definite point, sometimes referred to as the *climax* or *peak*, after which it comes to a conclusion.

Study this melody from Handel's *Judas Maccabaeus*:

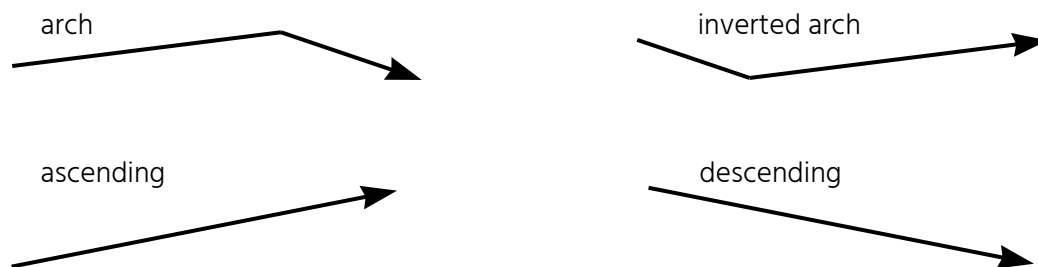
The image shows two staves of musical notation in G minor, common time. The first staff ends with a half cadence on a G note, labeled 'half cadence' and 'V'. The second staff begins with a downward arrow pointing to a G note, indicating the peak, and ends with an authentic cadence on a G note, labeled 'authentic cadence' and 'I'.

Variety is achieved by the use of long and short note values; movement by steps (measures 3, 4, 5, and 6) and skips and leaps (measures 1, 2, and 3); and the changing direction of the melodic line.

Repetition occurs in the rhythms of the following measures: 2 and 6, and 3 and 5. Also, the dotted quarter-to-eighth note rhythm in measure 1 occurs again in measure 7. The eighth note motive in measure 3 occurs again in measure 5.

The peak of the melody (indicated with an arrow) occurs just after the mid-point. It is the highest note of the melody and stands out conspicuously by an interval of a fourth from the general range of the other notes.

There are several basic contours that melodic lines generally follow:



### Writing an Eight-Measure Melody

③ Complete each eight-measure melody.

- In measure 2, write a **melodic sequence** based on the motive in measure one.
- In measure 4, end the first phrase on the dominant note, on a strong beat.\*
- In measure 6, write a **rhythmic imitation** of measure five.
- In measure 8, end the second phrase on the tonic note, on a strong beat.

#### F Major

#### C Major

#### D Major

#### G Major

\* These phrases may also end on the second scale degree or any member of the dominant chord.

## Melodic Dictation Practice

Melodic dictation involves hearing a piece of music and writing down the notes on the staff.

When listening to a melody in a dictation exercise, the student should keep the following in mind:

- The ear should be sufficiently prepared; the key and tonic tone should be firmly established.
- The tonic tone should always be kept in mind and used as a reference point when needed.
- The student should not begin to write immediately. At first, it is best to just listen carefully.
- The student should try to memorize what is heard so as to develop a strong musical memory.

To complete the following assignments, scan the QR code on the right or take the following route:

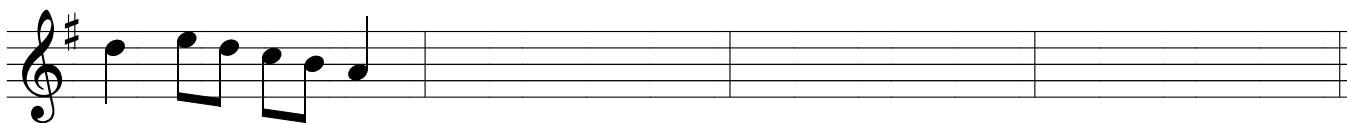


primotheory.com → Level 10 → Melodic Dictation Exercises

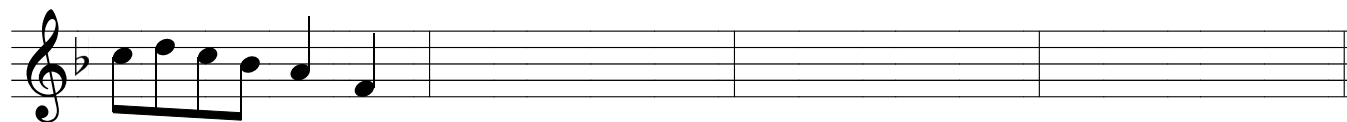
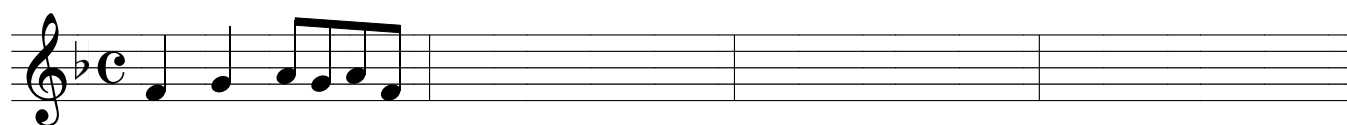


Complete each eight-measure melody. Write the blank measures.

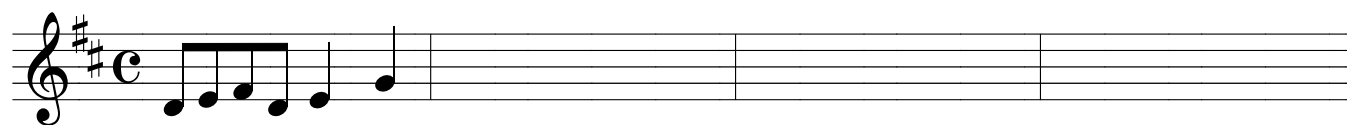
### ① G Major



### ② F Major



### ③ D Major



④ B $\flat$  Major

## ⑤ E Major

## ⑥ F Major



More melodic dictation exercises are available online:

[primotheory.com](http://primotheory.com) → Level 10 → Melodic Dictation:  
Supplemental Melodies



# APPENDIX I

## Ear-Training Exercises

### Interval Identification

The formulas for perfect and major intervals are summarized below:

**Perfect Unison** — same pitch

**Major 2nd** — two half steps

**Major 3rd** — four half steps; two whole steps

**Perfect 4th** — five half steps

**Perfect 5th** — seven half steps

**Major 6th** — nine half steps; a perfect 5th + a major 2nd

**Major 7th** — eleven half steps; one half step short of an octave

**Perfect Octave** — twelve half steps

Practice identifying major and perfect intervals:



primotheory.com → Level 10 → Interval Identification

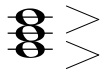


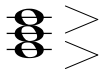
### Triad Identification

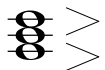
The student should be able to differentiate between the major, minor, augmented, and diminished triad.

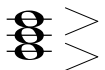
The student will benefit greatly by singing the tones of the triad while playing the triads on the piano.

The formulas for the four basic triad types are summarized here:

**Major**  3 half steps  
4 half steps

**Diminished**  3 half steps  
3 half steps

**Minor**  4 half steps  
3 half steps

**Augmented**  4 half steps  
4 half steps

Practice identifying the four basic triads:



primotheory.com → Level 10 → Triad Identification





## Cadence Identification

The student should be able to differentiate between the authentic cadence and the half cadence. The exercises on pages 58-61 of this section will help the student learn recognize the sound of the authentic cadence, half cadence, and plagal cadence.

Practice identifying the authentic and half cadence:



primotheory.com → Level 10 → Cadence Identification



## Sight Singing and Melodic Dictation

**Sight singing** is the singing of a melody from the score on seeing it for the first time. The exercises in this section serve as preparation for the singing of melodies written on the staff. The ultimate goal of all sight-singing practice is to (1) develop the ability to look at a score and hear it inwardly, with the *inner ear*, without the aid of an instrument, and (2) develop the ability to hear a melody and notate it without the aid of an instrument (melodic dictation).

### Scale Degrees

The exercises in the following section can be practiced by the student alone or with a teacher. The numbers used in the exercises in bold font represent the scale degrees—**1** is scale degree 1 (tonic), **2** is scale degree 2, and so on.

### Solfège in a Major Key

If you are using solfège, it is recommended that you use movable-*Do*, in which the tonic of any key is always *Do*, the second scale degree is always *Re*, and so on.

scale degrees:	1	2	3	4	5	6	7	8
<i>Do</i> -based Major:	<b>Do</b>	<b>Re</b>	<b>Mi</b>	<b>Fa</b>	<b>So</b> (Sol)	<b>La</b>	<b>Ti</b>	<b>Do</b>

### How to Sing the Exercises

The following exercises should be sung using scale degree numbers or solfège (preferably movable-*Do*) and can be performed in any key, depending on the student's comfortable singing range. A dash after a scale degree means to hold that scale degree an extra beat.

A triad or scale figure should be played from time to time as the student sings these exercises so that the key center (tonic) is kept firmly in mind.

## Sight Singing: The Authentic Cadence in Melody

The following sight-singing exercises are designed to familiarize you with the effect of the authentic cadence. Before you sing, be sure that you are aware of the location of the notes of the tonic triad on the staff.

Before each exercise prepare the ear by playing a scale or chord and the starting note.

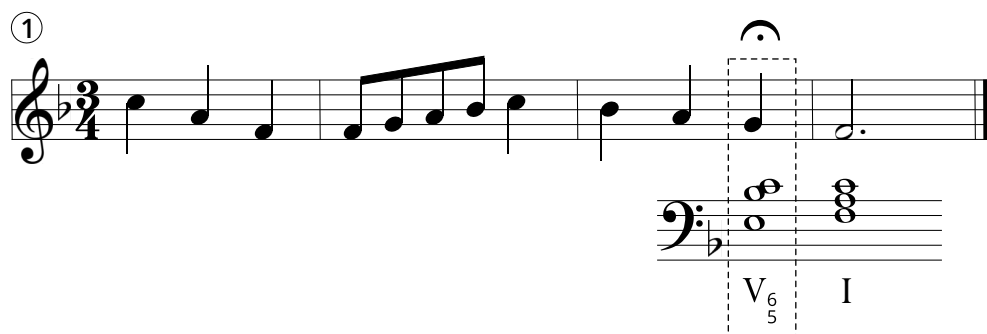
**Important:** Play the chords indicated by roman numerals as you sing the melody. Be sure to observe the fermatas—hold these notes long enough to feel their unresolved tension; notice the feeling of resolution when you finally sing and play the last note and chord. It is very important that you develop a sense of the cadence as used to mark points of arrival.

Sing each four-measure melody using solfège or scale degree numbers.

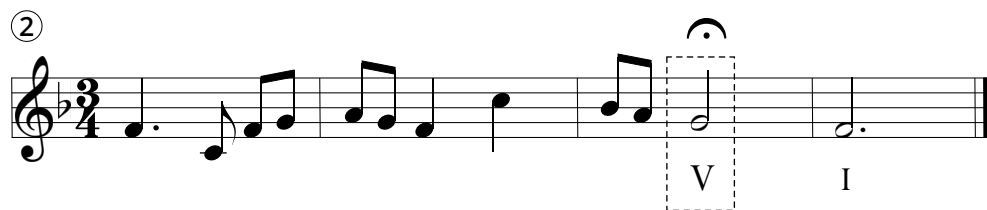
- Sing the melody. Play the chords at the points indicated by the roman numerals.
- After you sing, test accuracy by playing the melody on the piano.

### F Major: scale degree 2 resolving to 1.

①

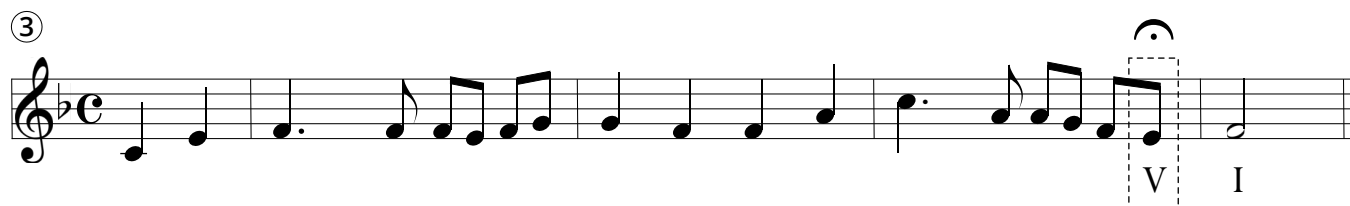


②




### F Major: scale degree 7 resolving up to 1.

③



④



**G Major: scale degree 2 resolving to 1.**

⑤

V<sub>6</sub><sub>5</sub> I

⑥

V I

**G Major: scale degree 7 resolving to 1.**

⑦

V I

⑧

V I

**D Major: scale degree 2 resolving to 1.**

⑨

V I

**C Major: scale degree 7 resolving to 1.**

⑩

V I

## Ear Training: Cadence Recognition Exercises

The melodic phrases found in the following assignment can be used to practice various aspects of ear training and musicianship.

- Melodic dictation — teacher plays melody, student takes melodic or chord dictation
- Sight singing — student sings the phrases, with or without chord accompaniment
- Cadence identification — student plays the melody with the right hand, chords with left
- Transposition — student transposes the phrases and chords to other major keys

These exercises are intended to help the student learn to recognize and distinguish between the various types of cadence.

### The Half Cadence and Authentic Cadence

The first staff illustrates a half cadence (I-V-2̂) and an authentic cadence (V-I-1̂) in F Major. The second and third staves show variations of these cadences with different melodic lines.

### The Plagal Cadence

The first staff illustrates a plagal cadence (I-IV-IV-I) with a 4̂ above the second IV. The second staff shows a plagal cadence (I-IV-IV-I) with a 6̂ above the second IV.

I IV IV I

I IV IV I

## Improvising with Cadences

The first and last note of each phrase is given. Play each phrase on the piano with the right hand, filling in the missing notes (marked with an “x”), as the left hand plays the chords indicated. Listen carefully as you improvise notes against the chords. Aim for a simple, clear expression of each chord.

The Half and Authentic Cadence

F Maj: I V V I

I V V I

The Plagal Cadence

I IV IV I

I IV IV I

# APPENDIX II

## Online Ear-Training Assignments

### Note to Teachers

The following assignments may be completed by the student alone using the online tools provided. Each assignment can be accessed directly with a mobile device using the QR codes provided.

Those students using a desktop computer should take the following route to access the menu for these online assignments:

primotheory.com → Level 10 → Appendix II: Ear-Training Assignments

The answers to the ear-training assignments are accessible only to the purchaser of this book. Email [info@primotheory.com](mailto:info@primotheory.com) to request the password or printable PDF file.

### Assignment 1



① You will hear **triads** played. Identify each as MAJ, min, AUG, or dim.

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

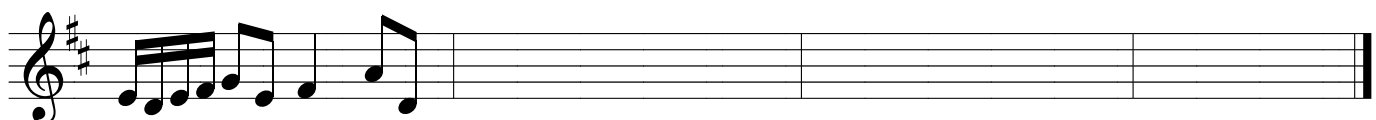
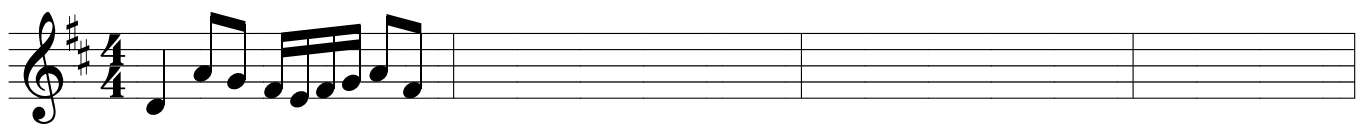
② You will hear major and perfect **intervals** played. Identify each by size and type (MAJ 2nd, PER 4th, etc.).

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

③ You will hear **chord progressions** played. The final two chords of each example form an authentic cadence or a half cadence. Write **AC** for authentic cadence and **HC** for half cadence.

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

④ You will hear an eight-measure melody in **D Major**. Fill in the blank measures.



## Assignment 2



① You will hear **triads** played. Identify each as MAJ, min, AUG, or dim.

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

② You will hear major and perfect **intervals** played. Identify each by size and type (MAJ 2nd, PER 4th, etc.).

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

③ You will hear **chord progressions** played. The final two chords of each example form an authentic cadence or a half cadence. Write **AC** for authentic cadence and **HC** for half cadence.

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

④ You will hear an eight-measure melody in **D Major**. Fill in the blank measures.

## Assignment 3



① You will hear **triads** played. Identify each as MAJ, min, AUG, or dim.

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

② You will hear major and perfect **intervals** played. Identify each by size and type (MAJ 2nd, PER 4th, etc.).

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

③ You will hear **chord progressions** played. The final two chords of each example form an authentic cadence or a half cadence. Write **AC** for authentic cadence and **HC** for half cadence.

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

④ You will hear an eight-measure melody in **C Major**. Fill in the blank measures.

## Assignment 4



① You will hear **triads** played. Identify each as MAJ, min, AUG, or dim.

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

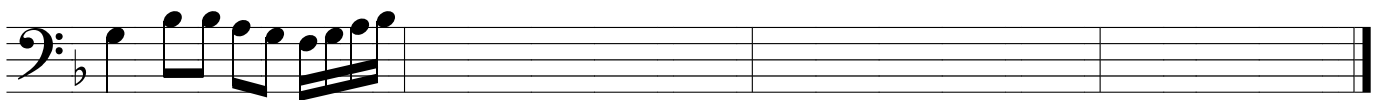
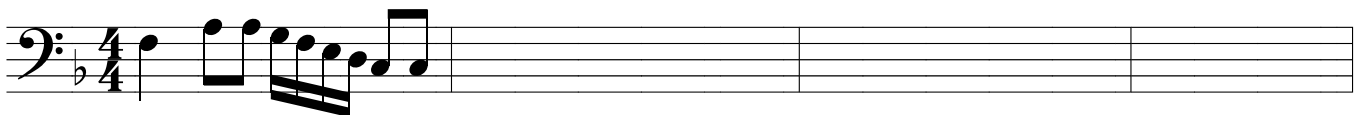
② You will hear major and perfect **intervals** played. Identify each by size and type (MAJ 2nd, PER 4th, etc.).

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

③ You will hear **chord progressions** played. The final two chords of each example form an authentic cadence or a half cadence. Write **AC** for authentic cadence and **HC** for half cadence.

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

④ You will hear an eight-measure melody in **F Major**. Fill in the blank measures.



## Assignment 5



① You will hear **triads** played. Identify each as MAJ, min, AUG, or dim.

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

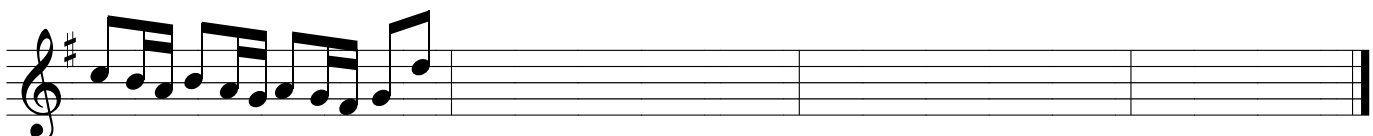
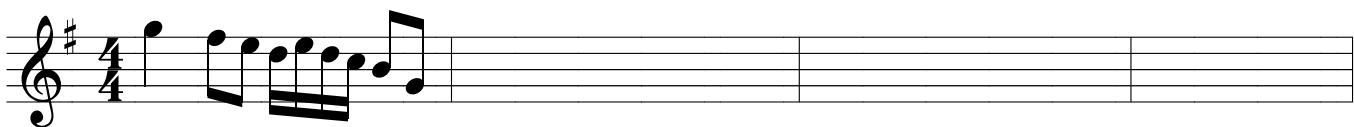
② You will hear major and perfect **intervals** played. Identify each by size and type (MAJ 2nd, PER 4th, etc.).

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

③ You will hear **chord progressions** played. The final two chords of each example form an authentic cadence or a half cadence. Write **AC** for authentic cadence and **HC** for half cadence.

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

④ You will hear an eight-measure melody in **G Major**. Fill in the blank measures.





## Assignment 6



① You will hear **triads** played. Identify each as MAJ, min, AUG, or dim.

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

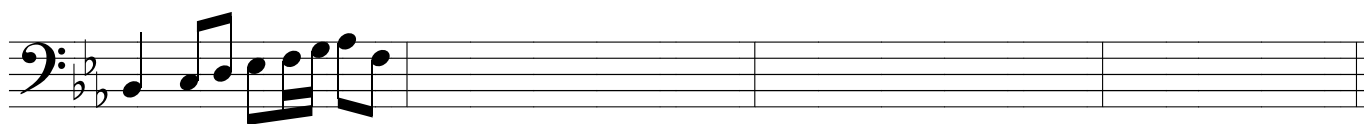
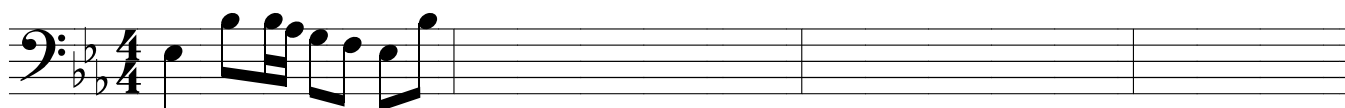
② You will hear major and perfect **intervals** played. Identify each by size and type (MAJ 2nd, PER 4th, etc.).

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

③ You will hear **chord progressions** played. The final two chords of each example form an authentic cadence or a half cadence. Write **AC** for authentic cadence and **HC** for half cadence.

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

④ You will hear an eight-measure melody in **E<sup>b</sup> Major**. Fill in the blank measures.



# Definitions

<i>ad libitum</i>	Freedom to improvise or vary the tempo
<b>alto</b>	The second highest voice in four-part harmony
<b>aria</b>	A composition for solo voice
<b>asymmetrical meter</b>	The combination of two simple meters where the pulse cannot be divided into 2, 3 or 4 beats per measure
<b>augmented interval</b>	A perfect or major interval that has been increased by a half step
<b>augmented second</b>	An interval of a second having three half steps (e.g. C-D#)
<b>augmented triad</b>	A triad made up of two major thirds
<b>bass</b>	the lowest voice in four-part harmony
<b>cadence</b>	A sequence of notes or chords occurring at the end of a phrase which give a sense of pause or closure
<b>cadenza</b>	A section in a composition that allows the performer to improvise or that is written in the style of an improvisation
<i>cantabile</i>	In a singing style
<b>chromatic scale</b>	A twelve-tone scale built only of half steps
<b>close harmony</b>	Four-part harmony with less than an octave between the soprano and tenor
<b>compound meter</b>	A meter in which the beat can be subdivided into groups of three
<b>diatonic scale</b>	A scale with seven different tones
<b>diminished interval</b>	A perfect or minor interval that has been decreased by a half step
<b>diminished triad</b>	A triad made up of two minor thirds
<b>dominant 7th chord</b>	A major triad with a minor 7th added above the root, found on scale degree 5
<b>first inversion triad</b>	A triad that has its third as the lowest pitch
<b>half cadence</b>	Any cadence which ends on the dominant triad (V)
<b>harmonic minor scale</b>	A minor scale that raises scale degree 7 a half step
<b>homophonic music</b>	A melody line supported by a chordal accompaniment
<b>interval inversion</b>	Turning an interval upside down so that the lower tone becomes the higher tone or the higher tone becomes the lower tone
<b>invention</b>	A short contrapuntal piece based on one theme
<i>lento</i>	A slow tempo
<b>major interval</b>	The intervals found in a major scale using scale degrees 1-2, 1-3, 1-6, and 1-7
<i>marcato</i>	Marked; emphasized
<b>melodic minor scale</b>	A minor scale that raises scale degrees 6 and 7 one half step ascending, and uses the natural minor form descending
<b>meter</b>	The organizing pattern of strong and weak beats
<b>minor interval</b>	An interval which is a half step smaller than the corresponding major interval
<b>monophonic music</b>	A single line of melody

<b>natural minor scale</b>	A scale using the following whole/half-step pattern: W–H–W–W–H–W–W
<b>open harmony</b>	Four-part harmony with an octave or more between the soprano and tenor
<b>opera</b>	A theatrical drama that is sung and set to music
<b>overture</b>	An orchestral composition used to introduce a large dramatic work
<b>perfect interval</b>	The intervals found in a major scale using scale degrees 1–1, 1–4, 1–5, and 1–8
<b>phrase</b>	Part of a melody which pauses or ends with a cadence
<b>plagal cadence</b>	A cadence consisting of the subdominant progressing to tonic; IV–I or iv–i
<b>polyphonic music</b>	Music in which two or more melodies are heard at the same time
<b>prelude</b>	A small composition that is usually followed by a larger composition in the same key
<b>rondo form</b>	A composition in which the first theme returns repeatedly (ABACAD, etc.)
<b>root position triad</b>	A triad with its root as the lowest pitch
<b>second inversion triad</b>	A triad that has its fifth as the lowest pitch
<i>semplice</i>	To play simply, without ornament
<i>senza</i>	Without
<b>seventh chord</b>	a four-tone chord, built by adding another third on top of a triad
<b>simple meter</b>	A meter in which the beat can be subdivided into groups of two
<b>soprano</b>	The highest voice in four-part harmony
<i>subito</i>	Suddenly
<b>syncopation</b>	The emphasis of beats which are normally weak in a meter; an off-beat
<b>tenor</b>	The second lowest voice in four-part harmony
<b>ternary form</b>	A piece that has three parts (ABA form)
<b>transposition</b>	The performing or writing of music in a key other than the original key
<b>tritone</b>	The interval of an augmented 4th or diminished 5th, so-called because it spans three whole steps
<i>troppo</i>	Too much
<b>voice leading</b>	The procedures governing the movement of voices in chord progressions
<b>whole-tone scale</b>	A six-tone scale built only of whole steps

## Definition Flash Cards



Go here to study these definitions online:

[primotheory.com](http://primotheory.com) → Level 10 → Definitions



