

*Handbook of
Basic Music
Theory*

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Notation of Pitch

Treble Clef - normally used for pitches above C4. Octave registers are shown with brackets.

G A B C D E F G A B C D E F G A B C D E F G A B C
 Middle C or C4

Bass Clef - normally used for pitches below C4.

C D E F G A B C D E F G A B C D E F
 Middle C or C4

Octave register designations allow us to name a specific pitch. We say "C4" rather than just "C" when we want to identify middle C. Shown above are the notes C1 through C7. All the pitches from one particular C up to, but not including the next C, are in the same octave register. Note that ledger lines can be used to extend the staff above or below. A "pitch class" includes all of the notes with a particular name. For example, "pitch class C" refers to all of the pitches on the piano named C or that are enharmonic with C (such as B#).

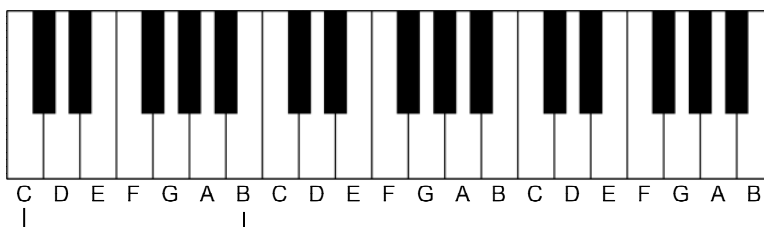
Please see the sections on major scales and minor scales for a discussion of accidentals and enharmonic notes.

Tenor clef - commonly used by bass clef instruments when playing in their highest registers

G3 A3 B3 C4 D4 E4 F4 G4
 Middle C or C4

Alto clef - used by the viola

A3 B3 C4 D4 E4 F4 G4 A4
 Middle C or C4



If the bottom note on this keyboard were C4, all note names bracketed (regardless of accidentals) would be in the same octave register (i.e. G4, B#4 and so forth).

Major Scales

All major scales have the same pattern of half steps and whole steps that conform to the following example. The half step (semitone) is the smallest interval in tonal music. Any two piano keys that are next to one another are a half step apart. This pattern is most commonly a white key to a black key, but the white key notes E to F and B to C are also half steps. A whole step (whole tone) is simply two half steps.

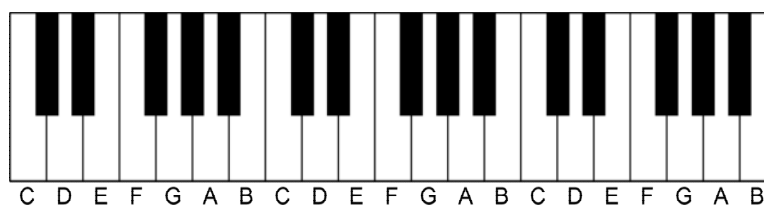
of half steps: 2 2 1 2 2 2 1

C major

Scale Degree Numbers: 1 2 3 4 5 6 7 1 (the octave)

Scale Degree Names in Major Keys:

- 1 = Tonic
- 2 = Supertonic
- 3 = Mediant
- 4 = Subdominant
- 5 = Dominant
- 6 = Submediant
- 7 = Leading Tone



An octave on the piano

In order to construct major scales on other tonics we need to use accidentals.

- # (sharp) raises a pitch by a half step
- ♭ (flat) lowers a pitch by a half step
- ♮ (natural) cancels an accidental (refers to white keys on piano)
- × (double sharp) raises a pitch by a whole step
- ♭♭ (double flat) lowers a pitch by a whole step

of half steps: 2 2 1 2 2 2 1

D^b Major

Scale Degree Numbers: 1 2 3 4 5 6 7 1

Scales are always named for the tonic note, in this case D^b.

Key signatures are derived from the accidentals required to make a scale on a given note. Key signatures, like scales, are named after the tonic. In other words, the key of D^b major has D^b as its tonic. While it is important to understand and be able to apply the pattern of half steps and whole steps in creating major scales, it is also important to memorize all of the key signatures for the major and minor scales.

Flats and sharps appear in key signatures in a predictable manner. This order of flats and sharps is as follows: Order of flats = BEADGCF Order of sharps = FCGDAEB

For example, if a key signature has two flats, they will be B and E, and if a key signature has 3 sharps, they will be F, C, and G.

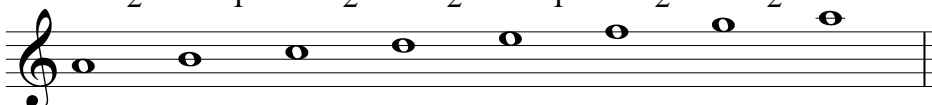
Minor Scales

There are three methods of constructing minor scales. The first and most tedious way is to count half steps and whole steps (semitones and whole tones). This method is useful for demonstrating the exact layout of a minor scale. However, the likelihood of making mistakes is increased.

There are three forms of minor scales: natural minor, harmonic minor, and melodic minor. The natural minor scale features only the accidentals found in that scale's key signature, while both the harmonic and melodic minor scales feature accidentals not found in the key signature. Melodic minor also features a descending form of the scale in which the scale reverts to natural minor.

of half steps:

a natural minor



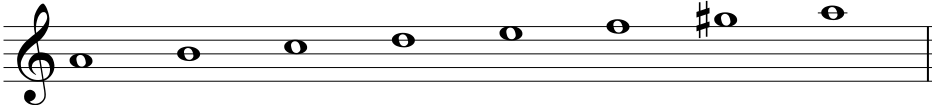
Scale Degree Numbers: 1 2 3 4 5 6 7 1

The names of the scale degrees are exactly the same as they are for major scales with one exception.

In natural minor, scale degree 7 is referred to as the "subtonic." In harmonic and melodic minor the seventh scale degree is a half step below the tonic and is called the "leading tone" as it is in major scales.

of half steps:

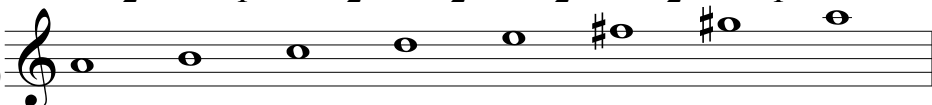
a harmonic minor



scale degree numbers: 1 2 3 4 5 6 7 1

of half steps:

a melodic minor (ascending form)



scale degree numbers: 1 2 3 4 5 6 7 1

The second way of constructing minor scales is to take the parallel major of that scale and then alter certain scale degrees. Parallel major/minor scales (keys) are scales that have the SAME tonic but DIFFERENT key signatures. For example, if a c minor scale is needed, construct a C major scale and then alter scale degrees 3, 6, and 7 as needed.

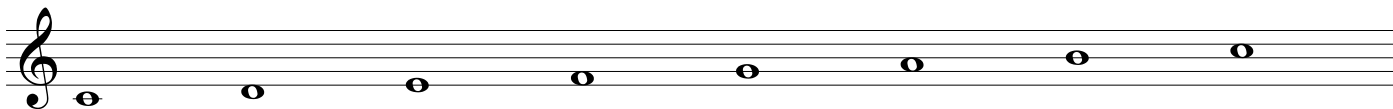
Below is a C major scale. If a c natural minor scale is desired, then scale degrees 3, 6, and 7 of the C major scale should be lowered by a half step (semitone).

If a c harmonic minor scale is needed, scale degrees 3 and 6 should be lowered by a half step, leaving scale degree 7 untouched.

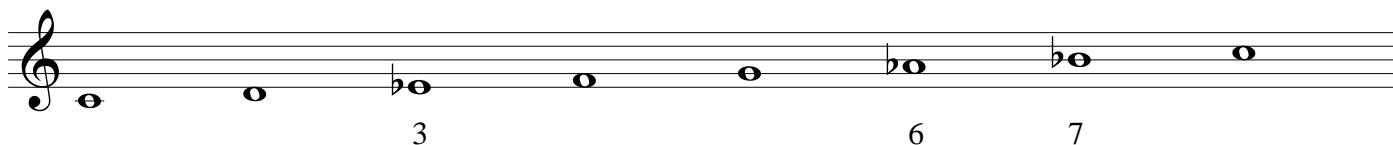
If a melodic minor scale (ascending) is wanted, then only scale degree 3 should be lowered by a single half step.

Remember -- a natural note (white key note on the piano) is raised a half step by using a sharp (#) and lowered a half step by using a flat (b). A note that is already modified by a flat is further lowered a half step with a double flat (bb) and raised a half step with a natural (♮). A note that is already modified by a sharp (#) is lowered a half step with a natural (♮) and raised a half step with a double sharp (*).

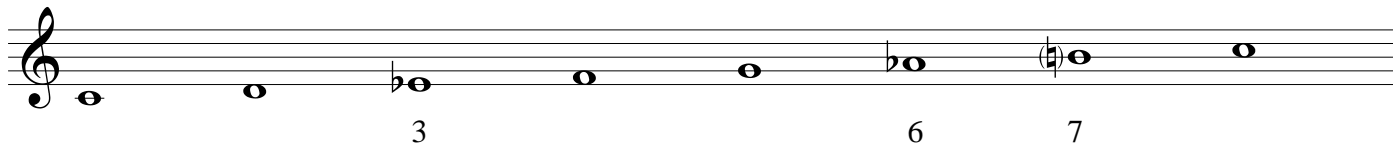
C major



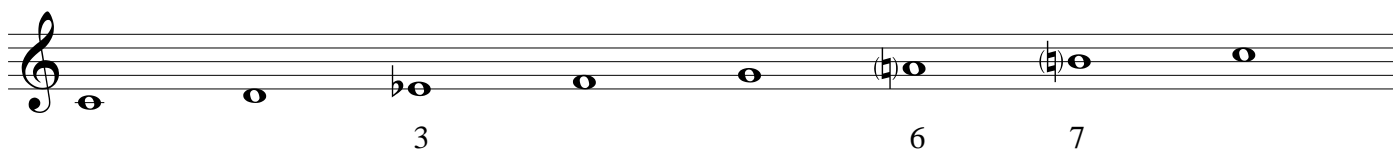
c natural minor



c harmonic minor



c melodic minor (ascending)



Remember that melodic minor in its descending form is simply the natural minor scale.

The third way of constructing a minor scale utilizes the concept of "relative" major and minor keys. Relative major/minor scales (keys) are scales that have the SAME key signature but DIFFERENT tonics. For example, if you are asked to construct a g natural minor scale, you need merely to find the key signature of its relative major. Finding relative keys is easy. If you are presented with the minor tonic (in this case g), you need to go UP three half steps (semitones) or a m3 (see section on intervals) to find the tonic of its relative major. If you need to find the relative minor of a given major tonic, then you must go DOWN three half steps (semitones) or a m3 from the tonic of the given major. This note is also scale degree 6 of the given major scale. Please see the bottom of this page for a discussion of enharmonic note spellings.

A musical staff in treble clef showing four notes: G (labeled 'g minor tonic'), Bb (labeled 'Bb major tonic'), C (labeled 'C major tonic'), and A (labeled 'a minor tonic').

Bb major's key signature includes 2 flats; therefore, the key signature for g minor has the same 2 flats. The same reasoning holds for the key of C major and a minor, both of which have no sharps or flats in the key signature.

A musical staff in treble clef showing the Bb major scale (Bb, C, D, Eb, E, F, G, Ab) and its relative minor, g minor (G, Ab, Bb, C, D, Eb, F, G). The text below reads: "Bb major is the relative major of g minor".

If you need to construct an harmonic minor scale, follow the steps above and then raise scale degree 7 by one half step (semitone).

A musical staff in treble clef showing the g harmonic minor scale: G, Ab, Bb, C, D, Eb, F#, G. The note F# is labeled with the number '7' below it.

If you need to construct a melodic minor scale (ascending form), follow the above steps and then raise scale degrees 6 and 7 by one half step (semitone).

A musical staff in treble clef showing the g melodic minor scale (ascending form): G, Ab, Bb, C, D, Eb, F#, G. The notes Eb and F# are labeled with the numbers '6' and '7' below them, respectively.

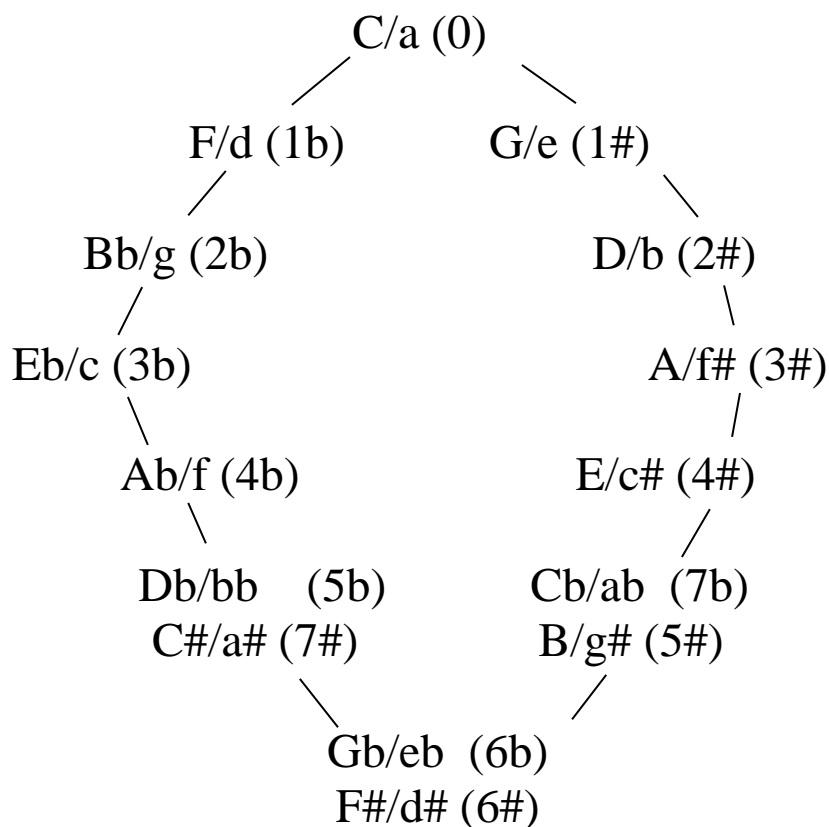
Enharmonic Spellings

The third scale degree of a given minor scale is also the tonic of its relative major, and the sixth scale degree of a given major scale is also the tonic of its relative minor. It is important to go up 3 letter names when counting the half steps in order to avoid spelling a key enharmonically (in this example C = the 1st letter name, D = the 2nd letter name, and Eb = the 3rd letter name). Enharmonic notes sound the same and share the same piano key but have different spellings. For example, Eb and D# share the same pitch and the same piano key but not the same spelling. Eb major (NOT D# major) is the relative major of c minor. Because relative keys have the same key signatures, they will either both have sharps or both have flats.

C minor is the relative minor of Eb major

A musical staff in treble clef showing the C minor scale (C, Db, Eb, F, G, Ab, Bb, C) and its relative major, Eb major (Eb, F, G, Ab, Bb, C, D, Eb). The note C is labeled '3 = tonic of its relative major' and the note Eb is labeled '6 = tonic of its relative minor'.

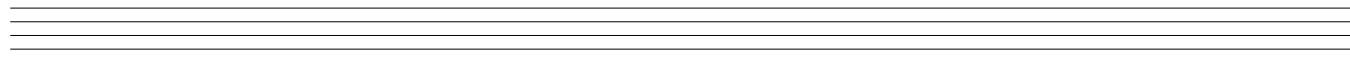
Circle of Fifths



This is the circle of fifths. By reading this chart clockwise, you will notice that the tonic of each new key is a P5 (see section on intervals) above the tonic of the previous key. In other words, each key starts on the dominant scale degree of the previous key. G is the fifth scale degree (dominant) in C major. G is also the next key on the circle of fifths.

By reading this chart counter-clockwise, you will notice that the tonic of each new key is a P5 below the tonic of the previous key. In other words, each key starts on the subdominant scale degree of the previous key. F is the fourth scale degree (subdominant) in C major. F is also the next key on the circle of fifths.

Notice also the enharmonic keys at the bottom of this chart. The Circle of Fifths should be memorized.



Key Signatures

Below are the major and minor key signatures written in the four most commonly used clefs.
Note that relative major/minor keys have the same key signature.

C major/a minor G major/e minor D major/b minor A major/f# minor E major/c# minor

B major/g# minor F# major/d# minor C# major/a# minor F major/d minor Bb major/ g minor

Eb major/c minor Ab major/f minor Db major/bb minor Gb major/eb minor Cb major/ab minor

Intervals

An interval is the distance between two notes. Intervals can either be harmonic (played at the same time) or melodic (played successively).

Intervals are identified by a number and a modifier. The half step (semitone) is the smallest interval in tonal music. Any two piano keys that are next to one another are a half step apart. This pattern is most commonly a white key to a black key, but the white key notes E to F and B to C are also half steps.

Interval modifiers include perfect (P), major (M), minor (m), augmented (+), and diminished (°).

Intervals that can be perfect = 1, 4, 5, and 8. (1= unison and 8 = octave)

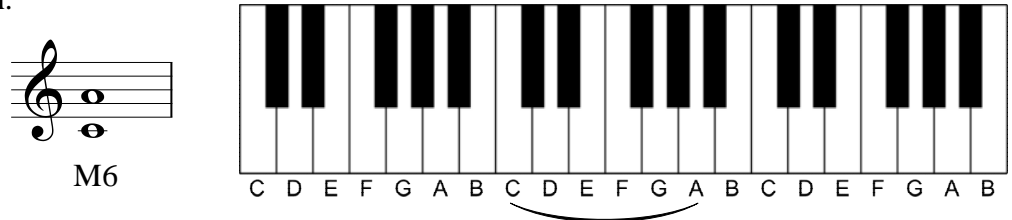
Intervals that can be major = 2, 3, 6, and 7.

Intervals that can be minor = 2, 3, 6, and 7.

Any interval can be augmented, and any interval can be diminished.

Identification of Intervals

1) Count the interval's numerical name. Start on the bottom note and call it "1" and continue to the top note. Do not skip a note name. In the following example, C = 1, D = 2, E = 3, F = 4, G = 5, and A = 6. The numerical name for this interval is a 6th.



2) Think of the key of the bottom note. Is the note "A" the normal sixth scale degree in C major? Yes it is, which makes this a M6.

It is important to memorize the intervals contained in the major scale.

M2	M3	P4	P5	M6	M7	P8	
Scale Degrees	1-2	1-3	1-4	1-5	1-6	1-7	1-8 (1)
	M2	M3	P4	P5	M6	M7	P8

Perfect intervals made larger by a half step (semitone) become augmented (i.e. P5 becomes an +5)

Perfect intervals made smaller by a half step (semitone) become diminished (i.e. P5 becomes a °5)

Major intervals made larger by a half step (semitone) become augmented (i.e. M3 becomes an +3)

Major intervals made smaller by a half step (semitone) become minor (i.e. M3 becomes a m3)

Minor intervals made smaller by a half step (semitone) become diminished (i.e. m3 becomes a °3)

Minor intervals made larger by a half step (semitone) become major (i.e. m2 becomes a M2)

This is a list of commonly encountered intervals. This list is NOT exhaustive.

Interval name		# of half steps (semitones)
P1	=	0 (unison)
m2	=	1
M2	=	2
+2	=	3
m3	=	3
M3	=	4
P4	=	5
+4	=	6 (tritone)
°5	=	6 (tritone)
P5	=	7
m6	=	8
M6	=	9
+6	=	10
m7	=	10
M7	=	11
P8	=	12 (octave)

Just as there are enharmonic spellings for notes, there are enharmonic intervals as well.

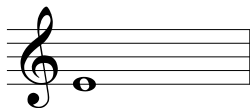
The +6 sounds the same as a m7 but is spelled differently. An +6 above C is an A#, while a m7 above C is a Bb. A# and Bb are enharmonic and are both 10 half steps (semitones) above C, but one is counted as a sixth and the other as a seventh.

Doubly diminished and doubly augmented intervals are possible but are not commonly encountered. We will not consider them during this course.

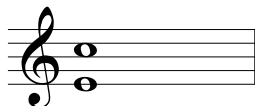


How to write an interval ABOVE a given note.

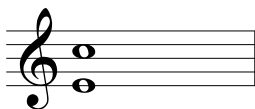
Example: Write a m6 above the given note.



1) Find the note a sixth above E, using E as 1. The note a sixth above E is a C.



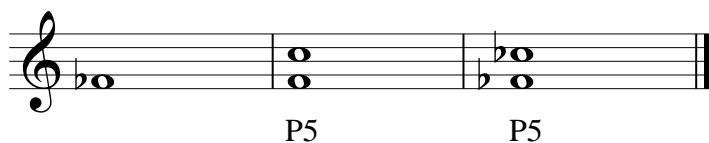
2) Think in the key of the bottom note (E major). C# is the sixth scale degree in the key of E major. C# is therefore a M6 above C. C# is a m6 above C.



Sometimes you will be asked to write an interval above a note that is the tonic of an unusual key, such as F^b.

You should temporarily remove the accidental and then add it back when you have determined the interval.

Example: Write a P5 above F^b.



1) Remove the flat so that you are now thinking in the key of F. A P5 above F is C. When you add the flat back to the F, you must also add a flat to the C to maintain the P5.

This is how to write an interval BELOW a given note.

A good way to write an interval below a given note is to first invert the interval and find this inversion above the given note. After this note is found, you will then place it an octave lower thus putting the note below the given pitch.

Inversion of an interval happens when the bottom pitch is placed above the top pitch (or the top pitch is placed below the bottom pitch). To find the inversion of an interval, subtract the number of the interval from 9. The number 9 is a constant value -- the sum of an interval and its inversion will always add up to 9.

The following should be memorized:

7ths invert to 2nds (and vice versa)

6ths invert to 3rds (and vice versa)

5ths invert to 4ths (and vice versa)

major intervals become minor

minor intervals become major

perfect intervals remain perfect

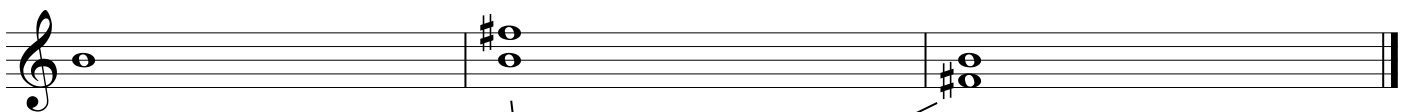
diminished intervals become augmented

augmented intervals become diminished

Example: find the inversion of a m6

$9 - 6 = 3$, so the inversion of a m6 is some kind of 3rd. Furthermore, minor intervals invert to major intervals, so a m6 inverts to a M3.

Example: Write a P4 below the given note:



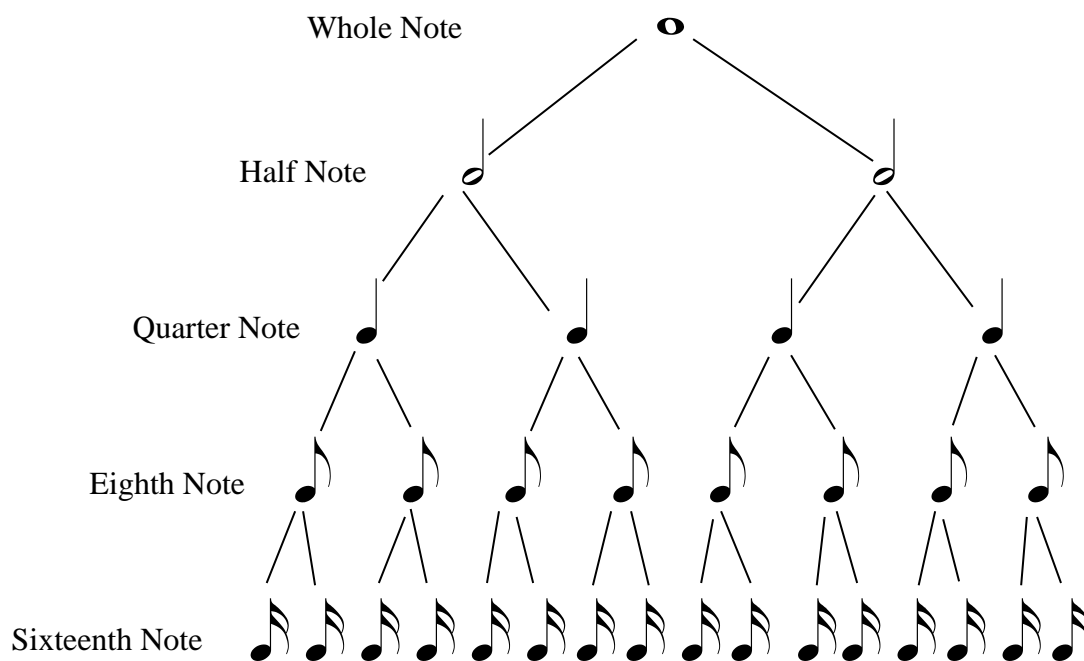
Step #1 -- a P4 inverts to a P5

Step #2 -- write a P5 above the given note

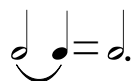
Step #3 -- drop the note an octave to place it below the given note -- this is the answer.

Rhythm

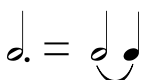
This "rhythm tree" shows values from the whole note through the sixteenth note.




A tie connects two notes that are the same pitch. Add the tied notes together to get the new duration.

For example, 

A dot makes a note longer. You add one-half of the original note's value when you add a dot to it.

For example, 

A note that is double dotted adds one-half of the original note's value and one-half the value

of the first dot. For example, 

For every symbol of sound there is a corresponding symbol of silence. Dots can be combined with rest symbols just as they can with notes. When only one musical line is on a staff, the placement of rests should be as follows for all clefs:



The **beat** is the pulse of the music. It is what we clap to, dance to, and march to. **Tempo** describes how fast the beats occur. It is described through the use of words (often Italian) and by the use of metronome markings. Metronome markings show how many beats occur in a minute. For example, ♩ = 60 means that there are 60 quarter notes occurring every minute, or one a second. Some beats are accented, which means they are stronger than other beats. Note that the first beats (downbeats) are all strong.

Meter

Duple meters (strong - weak) contain 2 beats.

Triple meters (strong - weak - weak) contain 3 beats.

Quadruple meters (strong - weak - somewhat strong - weak) contain 4 beats.

Division of the beat

Beats that divide into 2 equal parts are called simple beats. Simple beat notes are not dotted.

Beats that divide into 3 equal parts are called compound beats. Compound beat notes are dotted.

Both simple and compound meters can be duple (2 beats a measure), triple (3 beats a measure), or quadruple (4 beats a measure).

Time Signatures (meter signatures) show how many beats are in a measure and which note value gets a beat. Time signatures for simple beats have 2, 3, or 4 at the top. The top number shows the number of beats in a measure, while the bottom number shows the beat note value. Simple meters with 2 at the top are duple, those with 3 as the top number are triple, and those with 4 are quadruple.

If the bottom number in a time signature is 4, the quarter note is the beat note. If the bottom number in a time signature is 8, the eighth note is the beat note. If the bottom number is 2, then the half note is the beat note.

Some common simple meters are:

2 3 4 2 3 4 C 2 C 3 4
8 8 8 4 4 4 2 2 2 2

$\frac{4}{4}$ 4 beats per measure, with each beat dividing into 2 eighth notes

$\frac{3}{2}$ 3 beats per measure, with each beat dividing into 2 quarter notes

$\frac{3}{8}$ 3 beats per measure, with each beat dividing into 2 sixteenth notes

Time signatures for compound beats have 6, 9, or 12 at the top. The top number shows the number of divisions in a measure, while the bottom number shows the division value. Dividing the top number by 3 will yield the number of beats in the measure. For example, $6 \div 3 = 2$, which means that meters with 6 as the top number are duple meters; $9 \div 3 = 3$, which means that meters with 9 as the top number are triple meters; $12 \div 3 = 4$, which means that meters with 12 as the top number are quadruple meters.

A compound time signature with a bottom number of 8 means that the division is an eighth note and that the beat is a dotted quarter. A compound time signature with a bottom number of 16 means that the division is a sixteenth note and that the beat is a dotted eighth. A compound time signature with 4 at the bottom means that the division is a quarter and that the beat is a dotted half.

Some common compound meters are:

6	9	12	6	9	12	6	9	12
16	16	16	8	8	8	4	4	4

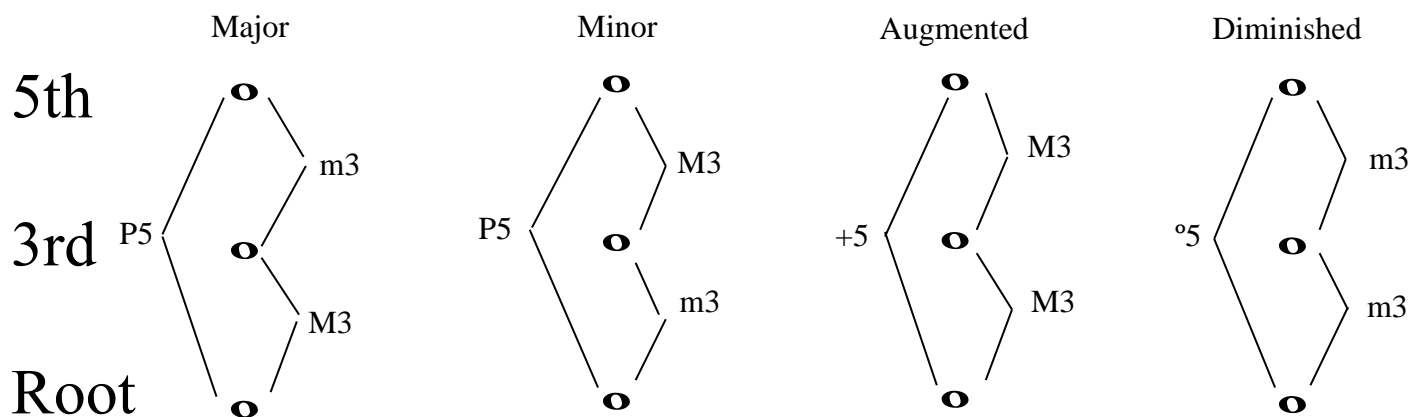
$\frac{6}{8}$ 2 beats per measure, with each beat dividing into 3 eighth notes

$\frac{9}{16}$ 3 beats per measure, with each beat dividing into 3 sixteenth notes

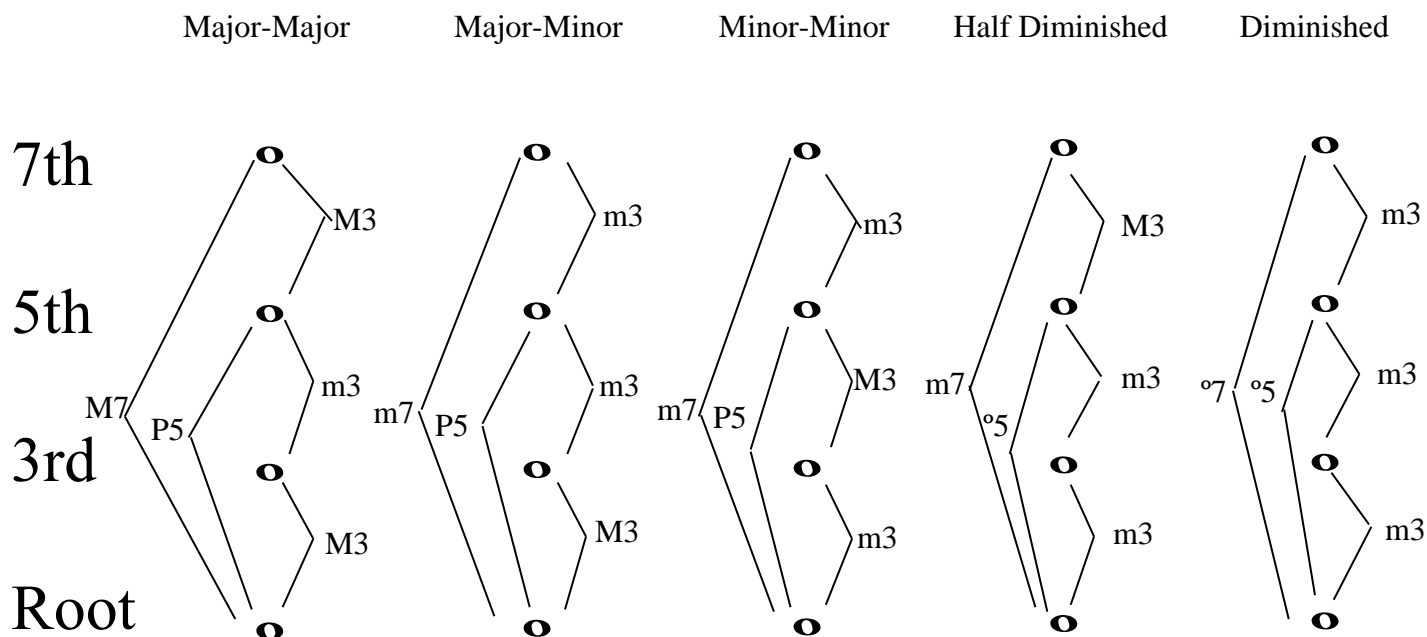
$\frac{12}{4}$ 4 beats per measure, with each beat dividing into 3 quarter notes

Chords

There are four types of triads. Each has a different structure



There are five types of commonly used seventh chords.

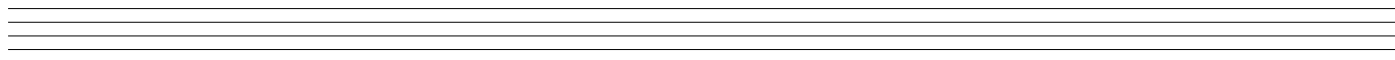


The structures of these triads and seventh chords should be memorized!

These nine chord types are among the most common sonorities in Western music.

There are only 7 possible spellings (not including accidentals) for triads and seventh chords. These patterns should also be memorized.

Triads = CEG DFA EGB FAC GBD ACE BDF
 Seventh chords = CEGB DFAC EGBD FACE GBDF ACEG BDFA

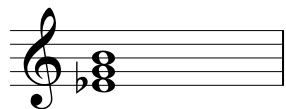


After the structures of these various chords are memorized, writing them becomes easy. Use your interval writing skills to your advantage.

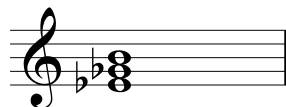
Example: write a minor chord on the following root



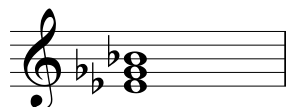
Step #1 -- Fill in the needed notes above the given note. The root of this chord is Eb, so the chord **MUST** be spelled using a G and a B.



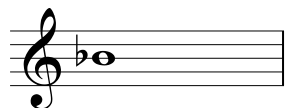
Step #2 -- What type of 3rd is G above Eb? It is a major third, so it must be lowered by one half step (semitone) to become a m3.



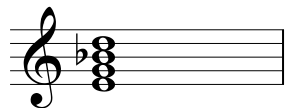
Step #3 -- You can either find out what type of 3rd B is above Gb, or you can find out what type of 5th B is above Eb. Either way you must make whatever modifications are necessary to complete the chord.



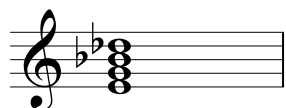
Example: write a Mm7 chord using the given note as the 5th



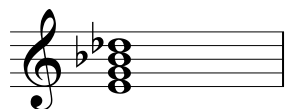
Step #1 -- Fill in the root, 3rd, and 7th.



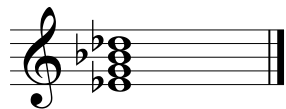
Step #2 -- Because the Bb (the 5th of the chord) is given, it cannot be changed. The top interval of a Mm7 is a m3. Find the m3 above Bb.



Step #3 -- Find the m3 below Bb.



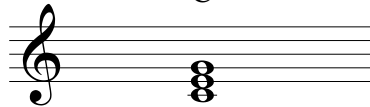

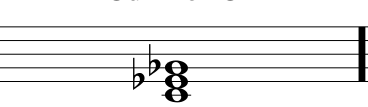
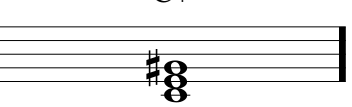
Step #4 -- You can either find the M3 below the G or a P5 beneath the Bb. Either will yield the correct answer.



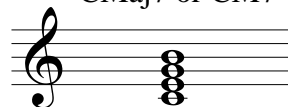
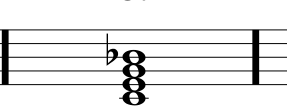
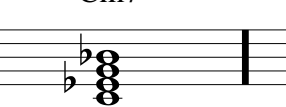
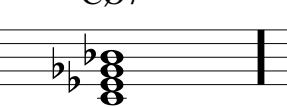

Lead-Sheet Symbols

Below are lead-sheet symbols for the four triad types and five seventh chord types covered in MUS 1350. Please note that this system is not completely standardized in textbooks and published music; there are often several symbols that can be used to represent a given chord.

Lead sheet symbols:

C	Cm	Cdim or C ^o	C+
			
Chord type: major	minor	diminished	augmented

Lead sheet symbols:

CMaj7 or CM7	C7	Cm7	CØ7	Cdim7 or C ^o 7
				
Chord type: major major seventh	major minor seventh	minor minor seventh	half diminished seventh	diminished diminished seventh

Lead-sheet symbols can be used to harmonize a melody. The usual custom is to place the lead-sheet symbol directly above the measures in a melody.

Bass Position Symbols

Chords can appear in root position or in inversion. There are three bass positions for triads and four bass positions for seventh chords. Root position chords feature the root as the lowest note (in the bass). First inversion features the 3rd of the chord as the lowest note (in the bass). Second inversion features the 5th of the chord as the lowest note (in the bass). Seventh chords allow the possibility of third inversion, in which the seventh of the chord is the lowest note (in the bass).

These inversions are indicated through the use of bass position symbols. During the Baroque period, Arabic numerals were added to bass lines to show the accompanying harmonies. This system of figured bass symbols is now used in tonal music theory in a simplified form. These numbers indicate intervals above the lowest note in the texture, even if it is in treble clef. For the purposes of this class, we will normally assume these are "simple" intervals, intervals that are smaller than an octave. In part-writing and analysis, however, these numerals often refer to "compound" intervals, intervals that are larger than an octave.

	Root pos.	1st inv.	2nd inv.	Root pos.	1st inv.	2nd inv.	3rd inv.
Complete Symbol	5 3	6 3	6 4	7 5 3	6 5 3	6 4 3	6 4 2
Most Common Symbol		6	6 4	7	6 5	4 3	4 2

These bass position symbols should be memorized.

In addition, various symbols may be combined with these bass position symbols to raise or lower a pitch. For example, a # or + next to a numeral or slash through a numeral indicates that you should raise that note by a half step (semitone). A ♭ symbol next to a number indicates that you should lower that note by a half step.

Key of C major

7_b = 6[#]
4
3 =

If there are no modifying symbols next to a bass position symbol, you should use the notes found in the diatonic scale (i.e., use the accidentals found within the key signature). This next example is in C# major, a key with 7 sharps in the signature. Notice how there are NO indications to raise or lower a note in the bass position symbol!

4
2

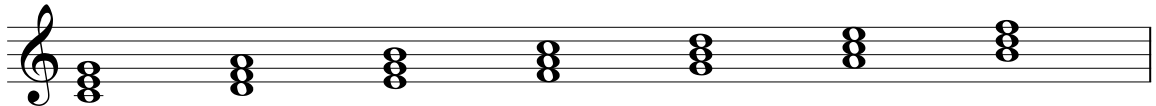
The important point to remember regarding bass position symbols is to take them literally. For example, a first inversion triad has notes a sixth and a third above the bass, a second inversion triad has notes a sixth and fourth above the bass, and so on.

Roman Numerals

The key of C major has no sharps or flats. The seven white key notes found within the key of C major are said to be diatonic in that key, while any notes that are sharp or flat are called chromatic. We will deal only with chords that are diatonic within a given key. Diatonic chords only use accidentals found within the key signature. F# is a diatonic note in G major, and a D F# A chord is therefore a diatonic chord within G major. The note C#, whether used as part of a chord or as a non-chord tone, would be chromatic.

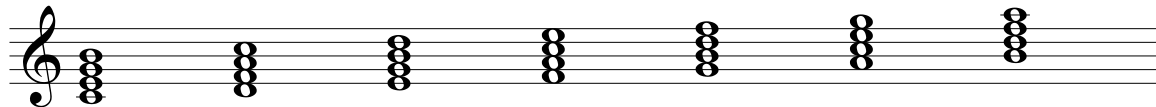
There are 7 diatonic triads and 7 diatonic seventh chords in any given major key. In tonal theory, Roman numerals are often used to identify the chord type (major, minor, etc), and the root of a chord.

Diatonic chords in major (example is in C major)



Scale degree	1	2	3	4	5	6	7
Chord type	major	minor	minor	major	major	minor	diminished
Roman numeral	I	ii	iii	IV	V	vi	vii ^o

Diatonic seventh chords in major (example is in C major)



Scale degree	1	2	3	4	5	6	7
Chord type	major major seventh	minor minor seventh	minor minor seventh	major major seventh	major minor seventh	minor minor seventh	half diminished seventh
Roman numeral	IM7	ii7	iii7	IVM7	V7	vi7	vii ^o 7

Capital Roman numeral = major triad (I)

Lower case Roman numeral = minor triad (ii)

Capital Roman numeral with "+" = augmented triad (III+)

Lower case Roman numeral with "o" = diminished triad (vii^o)

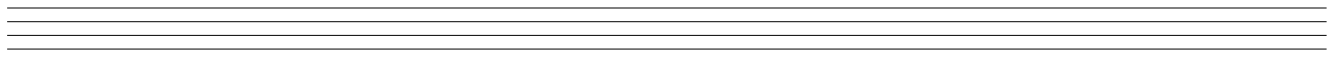
Capital Roman numeral with "M7" = major major seventh chord (IVM7)

Capital Roman numeral with "7" = major minor seventh chord (V7)

Lower case Roman numeral with "7" = minor minor seventh chord (vi7)

Lower case Roman numeral with "Ø7" = half diminished seventh chord (vii^o7)


Lower case Roman numeral with "°7" = diminished diminished seventh chord (fully diminished seventh chord) (vii^o7)



Because of the existence of harmonic and melodic minor scales, the situation in minor is more complicated. There are 13 possible diatonic triads and 16 possible diatonic seventh chords in a given minor key.

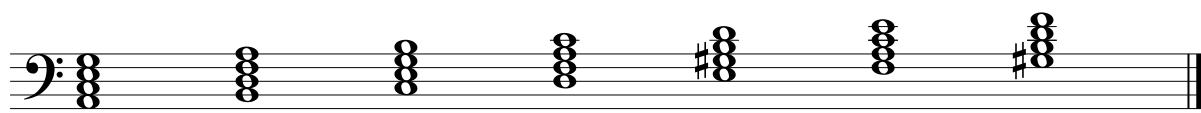
Diatonic triads in minor (example is in the key of a minor)

Asterisk (*) indicates most commonly used chords used in minor keys

	*	*		*		*		*	*		*		*
													
Scale degree	1	2	2	3	3	4	4	5	5	6	6	7	7
Chord type	m	dim	m	M	aug	m	M	m	M	M	dim	M	dim
Roman numeral	i	ii°	ii	III	III+	iv	IV	v	V	VI	vi°	VII	vii°

Diatonic seventh chords in minor (example is in the key of a minor).

Shown are the 7 most common seventh chords used in minor keys.

							
Scale degree	1	2	3	4	5	6	7
Chord type	minor minor seventh	half diminished seventh	major major seventh	minor minor seventh	major minor seventh	major major seventh	diminished diminished seventh
Roman numeral	i7	iiØ7	IIIM7	iv7	V7	VIM7	vii°7

In minor keys, all of the common triads and seventh chords are constructed using the natural minor form of the scale EXCEPT for the V, V7, vii° and vii°7. These utilize the leading tone, which is the raised seventh scale degree found in harmonic and melodic minor scales. Indeed, the purpose of the harmonic minor scale is to enable the creation of the V and vii° chords in minor. **MAKE SURE YOU REMEMBER TO ADD THE LEADING TONE TO THESE CHORDS IN MINOR.** The leading tone of a root position V chord will be the third of the chord. The leading tone of a root position seventh chord will be the root of the chord



