

Music Theory 101

Staff is a set of five lines that notes are placed on.



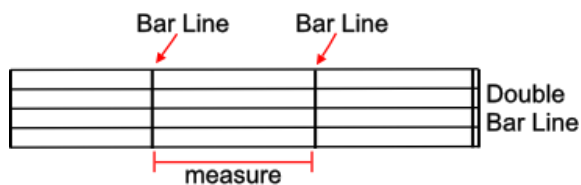
Clefs are signs that designate characters called notes to certain places on the staff.

The sign below is the **treble clef** also called the G clef because the loop curves around the G line.



The sign above is the **bass clef** also called the F clef because the line between the two dots is the F line.

The staff above is called the **grand staff** because if you add a middle C line in between the two clefs you will have an eleven line staff connecting both clefs.



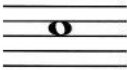

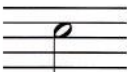




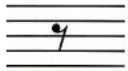

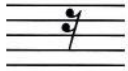
Measures are the segments which notes are placed in with **bar lines** marking their location.

A **double bar line** marks the end of a section or song.

A **note** is a sign that represents the length and pitch of a sound.

A **rest** is a pause or silence.

Below is a list of notes and rests with the number of counts listed at the far left.

Beat	Name	Note	Rest
4	Whole		
2	Half		
1	Quarter		
1/2	Eighth		
1/4	Sixteenth		

The **time signature** is a sign that is placed at the beginning of music that tells how many beats are in a measure and the note value one pulse (beat) represents.

The top number represents the number of beats per measure.

The bottom number represents the note value.











$4/4$ = 4 quarter notes per measure

$3/4$ = 3 quarter notes per measure

$6/8$ = 6 eighth notes per measure

$3/2$ = 3 half notes per measure

To make music easier to read, small duration notes are grouped together to form complete beats. This is accomplished by joining the tails of the notes together making them into a straight line called a **beam**. The process of connecting the notes together is called **beaming**. Only eighth notes or shorter can be beamed.

	Change Flags	To Beams
Eighth Notes		
Sixteenth Notes		
Thirty-Second Notes		
Sixty-Fourth Notes		

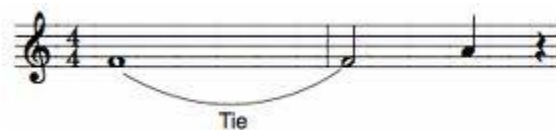
A **dot** is a notational device that is placed after a note which increases the length of the note by 1/2 its original value.

$$\text{Dotted Quarter Note} = \text{Quarter Note} + \text{Eighth Note} = 2 + 1 = 3 \text{ Beats}$$

$$\text{Dotted Half Note} = \text{Half Note} + \text{Quarter Note} = 1 + 1/2 = 1 \text{ \& } 1/2 \text{ Beats}$$

$$\text{Dotted Quarter Note} = \text{Quarter Note} + \text{Eighth Note} = 1/2 + 1/4 = 3/4 \text{ of a Beat}$$

Ties are notations in music that indicate two notes (often the same note) to be played or tied together thus making the two notes one.



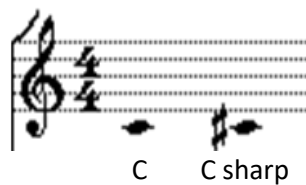
Slurs are notations in music that connect two or more notes together indicating that they be played legato or smooth without a break in the sound.



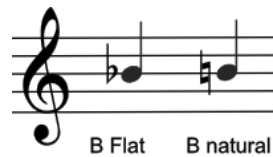
An **accidental** is a sign that is used to raise or lower a note.

Accidental	Name	Explanation
#	sharp	raises pitch ½-step
b	flat	lowers pitch ½-step
♮	natural	Cancels all other accidentals
×	double sharp	raises pitch two ½-steps
bb	double flat	lowers pitch two ½-steps

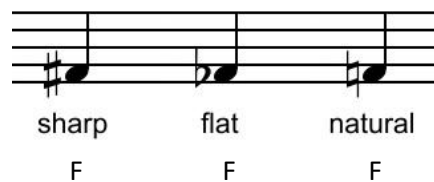
The # or **sharp sign** raises the note ½ step (half step).



The b or **flat sign** lowers the note ½ step (half step).



The natural sign cancels all other accidentals.



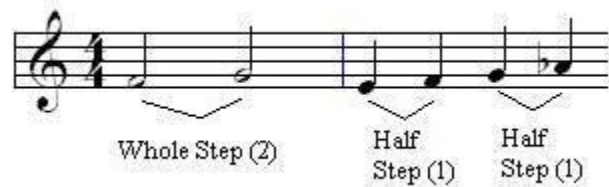
An **interval** is the distance between two notes.

The smallest interval is called the **half step**.

Example: E to F is a half step interval.

The **whole step** is an interval of two half steps.

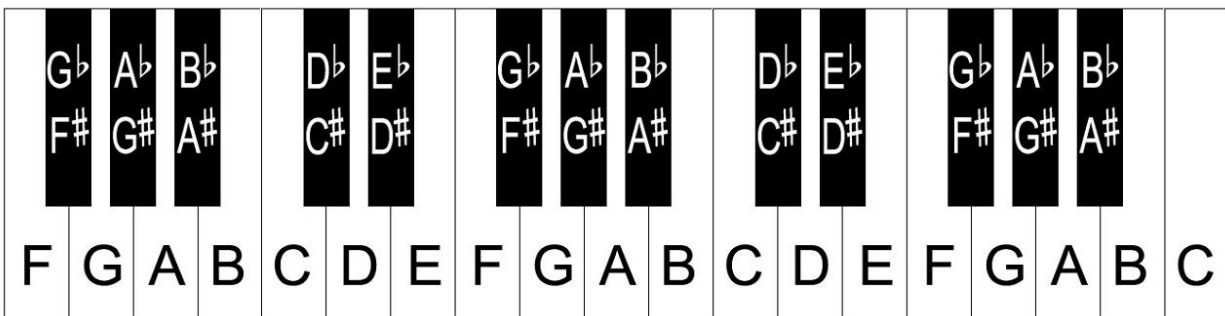
Example: F to G is a whole step because F# is between making it two half steps.



Sometimes notes sound the same pitch but have different names making them **enharmonic equivalents**. In modern musical notation, an **enharmonic equivalent** is a note or key signature that is equivalent to some other note or key signature but "spelled", or named differently.

Example: G# = Ab D# = Eb

See the piano keyboard below for visual examples.



A **scale** is a set of musical notes ordered by a fundamental pitch.

The **chromatic scale** is a musical scale with twelve pitches built on half step intervals.

The chromatic scale contains all notes that can be played within the given scale root name (see piano)

Below is a C chromatic scales (C to C) – Ascending with sharps and descending with flats

The image shows two systems of musical notation for the C chromatic scale in 4/4 time. The first system shows the ascending scale from C to C, with notes: C, C#, D, D#, E, F, F#, G, G#, A, A#, B, C. The second system shows the descending scale from C to C, with notes: C, B, Bb, A, Ab, G, Gb, F, E, Eb, D, Db, C. Each system consists of a treble and bass clef staff with notes and accidentals written below them.

A **major scale** is a seven note scale built on the intervals W-W-H-W-W-W-H with a repeated root.

Below is a C major scale with the scale degrees (1 to 7) and intervals between each note listed below.

The image shows the C major scale in 4/4 time on a treble clef staff. The notes are C, D, E, F, G, A, B, C. Above the notes are the scale degrees 1 through 7. Below the notes are the intervals: 1, 2, 3, 4, 5, 6, 7.

Whole step – whole step – ½ steps – whole step – whole step – whole step – ½ step

There are twelve major scales for each of the twelve notes of the chromatic scale.

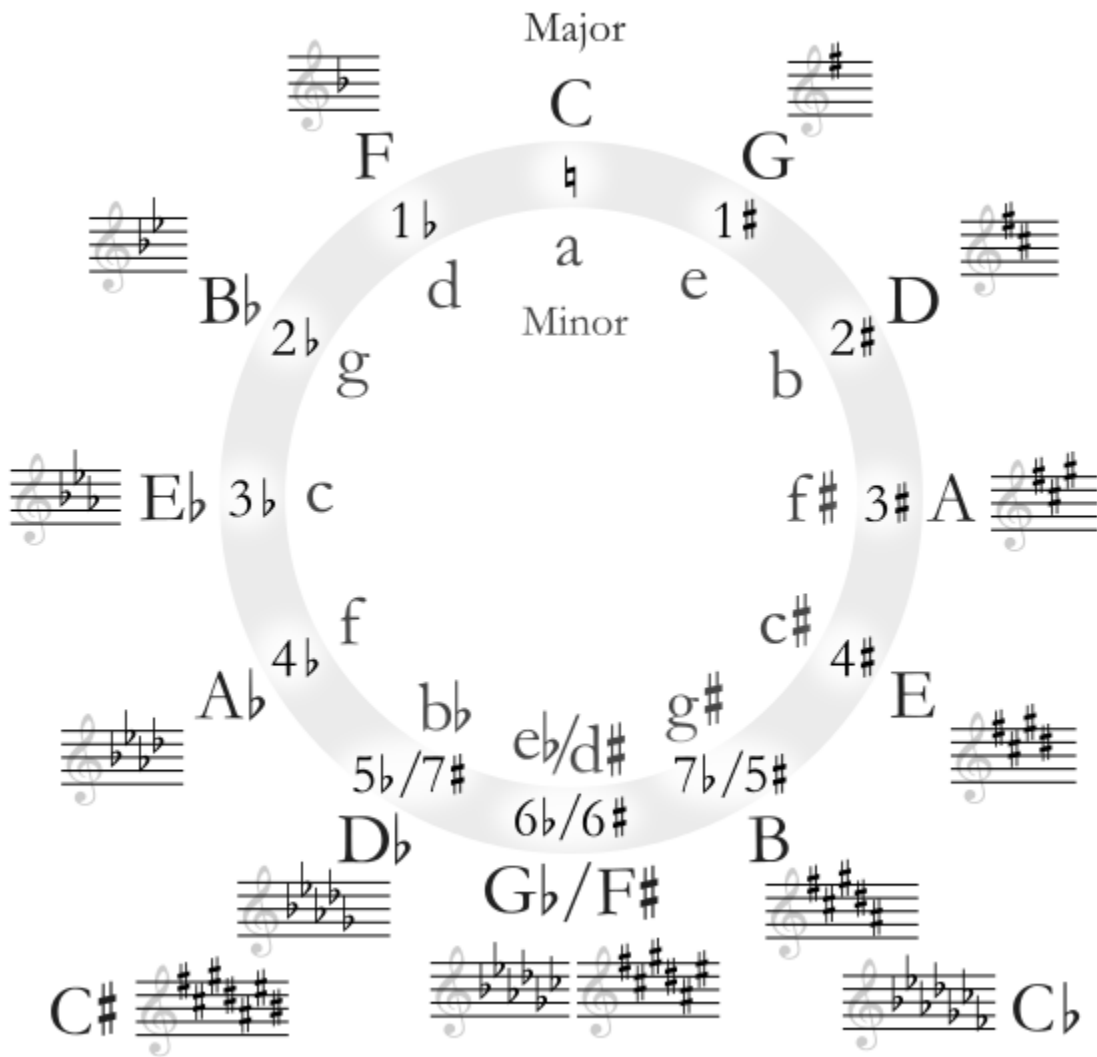
Below is the Circle of 5ths and 4ths chart with the key signatures for both the major and minor keys.

When a sharp is added to a major scale the root or scale name takes the 5th degree of that scale.

Example: C + 1# = G Major (moving clockwise)

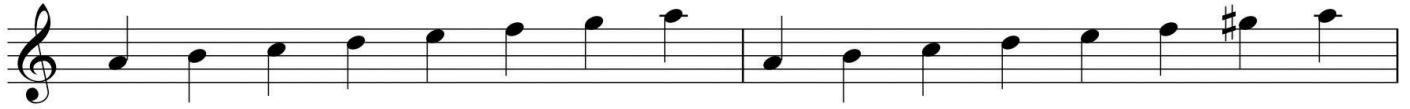
When a flat is added to a major scale the scale name takes the 4th degree of that scale.

Example: C + 1b = F Major (moving counter clockwise)



Natural Minor

Harmonic Minor (+7)



Melodic Minor (+6 & +7 ascending; natural minor descending)

