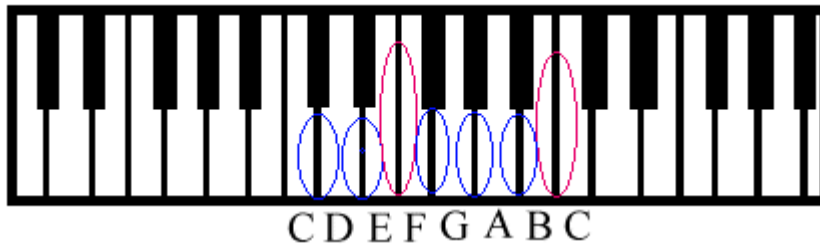


THEORY- STUDY GUIDE

1. A **HALF (1/2) STEP** is the distance between any two notes along the **chromatic scale**. If you play any note of the chromatic scale and then play the next higher note **OR** the next lower note, that is considered a **HALF STEP**.
2. A **WHOLE (1) STEP** is equal to the distance of two **HALF STEPS**. Therefore, if you play any note of the chromatic scale and then play, not the next note but the note after that, you are executing a **WHOLE STEP**. (C to C# is a **half step**, C to D is a **whole step** etc...)

FIGURE 1-



3. A note that is neither **sharp** nor **flat** is considered **NATURAL**.
4. **ACCIDENTALS**- Accidentals are symbols that alter the pitch of a note.

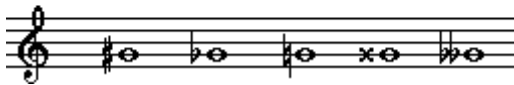
Flat ♭ lowers pitch by 1/2 step

Sharp ♯ raises pitch by 1/2 step

Double Sharp × raises pitch by 1 step

Double Flat ♭♭ lowers pitch by 1 step

Natural ♮ cancels previous accidental



Accidentals are placed immediately to the left of the note they affect.

5. If you start on **C** and play only the **NATURAL** notes until you reach the **octave**, you will arrive at the notes of the **C MAJOR SCALE**:

C - D - E - F - G - A - B - C

6. **NATURAL HALF STEPS-** (Not to be confused with \flat)

The C Major scale makes use of the NATURAL half steps between E and F, and also between B and C. It is called a natural half step because there is *naturally* one half step between them without the use of an accidental.

7. Now, if we look at the **whole steps** and **half steps** between each note of the **C MAJOR SCALE**, we find this pattern:

W - W - H - W - W - W - H

Comprehending this pattern of **Whole steps** and **Half steps** is the single most important part of understanding music theory.

Every major scale in every key follows this **W/H pattern**.

For example, if we start on **G** and apply the pattern, we get the notes of the **G Major** scale:

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

8. A handy device one can use to remember the order of Major sharp key signatures:

G
Down
And
Eat
Breakfast
Fat
Charlie

What scale has 4 sharps?

Solution: G Down And Eat E MAJOR

What scale has 6 sharps?

Solution: G Down And Eat Breakfast Fat F MAJOR

9. A device that can be used to remember the sharps associated with each key signature is:

Fat
Cats
Go
Down
Alleys
Eating
Birds

(This is the order of sharps as they appear in a key signature)

{Step 1 determines number of sharps; Step 2 determines which sharps are in the key and their order}

What are the sharps in E MAJOR?

Solution:

Step 1:

Go Down And Eat

E MAJOR

Step 2:

Fat Cats Go Down

F, C, G, D

Answer: F, C, G, D

What are the sharps in F# MAJOR?

Solution:

Step 1:

Go Down And Eat Breakfast Fat

F MAJOR

Step 2:

Fat Cats Go Down Allies Eat

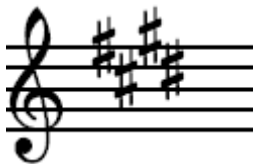
F, C, G, D, A, E

Answer: F, C, G, D, A, E

10. Another way to determine the key is by looking at the key signature:

go one Half step above the last sharp in the key signature

For instance:



The last sharp in this key signature is D#, a Half step up from D# is E Major.

SCALES WITH FLATS IN THEIR KEY SIGNATURES ARE THE FOLLOWING:



F Major Bb Major Eb Major Ab Major
D Minor G Minor C Minor F Minor



Db Major Gb Major Cb Major
Bb Minor Eb Minor Ab Minor

11. A handy device one can use to remember the order of flats in a Major key signature is:

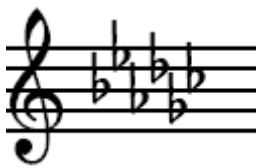
BEAD Greatest Common Factor

Or simply

BEADGCF

To determine the key by looking at a key signature of flats, Look to the second to last flat in the key signature.

For instance:



The second to last sharp in this key signature is Gb, the key is Gb Major.

*The only major keys that these rules do not work for are C major (no flats or sharps) and F major (one flat). It is easiest just to memorize the key signatures for these two very common keys.

Relative Minor and Major Keys

12. Because they follow different interval patterns, C minor and C major do not have the same key signature. Instead, C minor has the same key signature as Eb major. Because they have the same key signature, C minor is called the relative minor of Eb major, and Eb major is the relative major of C minor. C is a minor third lower than Eb, and in fact *a relative minor is always a minor third lower than its relative major*. Another way to think of this is up a Major sixth. C is a major sixth higher than Eb.

C major: no flats or sharps

C minor: three flats

E flat major: three flats

Relative major and minor

The diagram shows three musical staves. The first staff is C major (no sharps or flats). The second staff is C minor (three flats). The third staff is E flat major (three flats). Red arrows point from the text 'Relative major and minor' to the C minor and E flat major staves, indicating their relationship.

13. If you take the natural notes from A to A, this is an A minor scale. Specifically it is called an A natural minor scale. There are two other minor scales (harmonic minor, and melodic minor).

A natural minor scale

A B C D E F G A

\ W / \ 1/2 / \ W / \ W / \ 1/2 / \ W / \ W /

The diagram shows the interval pattern for the A natural minor scale: whole, half, whole, whole, half, whole, whole.

14.

HARMONIC MINOR:

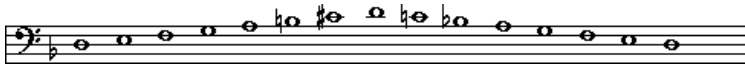
To form a harmonic minor scale, **take the natural minor, and raise the seventh note**. To change the D-minor scale above into a harmonic minor scale, we would raise the seventh note, the 'C' to become a 'C#'. Here it is:

The diagram shows the D harmonic minor scale on a musical staff. The notes are D, E, F, G, A, B-flat, C-sharp, D. The C-sharp note is marked with a sharp sign and a box.

15.

MELODIC MINOR:

To form a melodic minor scale, **take the natural minor, raise the sixth AND seventh note on the way up, and put them back to their "natural" state going down.** Because the melodic minor looks different going up than it does going down, you must write a melodic minor ascending and descending. Here is a D-Melodic minor scale:



16.

Modes are derived from a parent scale. Any scale can function as this parent scale. This is the most common and useful modal structure in western musical theory. The ancients ordered the modes thusly:

1. **C - Ionian**

2. **D - Dorian**

3. **E - Phrygian**

4. **F - Lydian**

5. **G - Mixolydian**

6. **A - Aeolian**

7. **B – Locrian**

17.

The Whole step Half step Structure of the modes can be determined by using *natural* Half steps discussed in No. 6.

Ionian-

C D E \wedge F G A B \wedge C

Dorian-

D E \wedge F G A B \wedge C D

Phrygian-

E \wedge F G A B \wedge C D E

Lydian

F G A B \wedge C D E \wedge F

Mixolydian

G A B/C D E/F G

Aeolian

A B/C D E/F G A

Locrian

B/C D E/F G A B

18.

A handy device to use when trying to remember the order of the modes is:

I	Ionian	C D E/F G A B/C
Don't	Dorian	D E/F G A B/C D
Phind	Phrygian	E/F G A B/C D E
Lydia	Lydian	F G A B/C D E/F
Mixing Lemonade	Mixolydian	G A B/C D E/F G
Any	Aeolian	A B/C D E/F G A
Longer	Locrian	B/C D E/F G A B

Always associate Ionian with the parent major scale of "C".

As in **C Ionian**

List the other scales alphabetically so that the key signature is maintained.

19.



Chromatic Scale

The chromatic scale contains twelve notes separated from one another by a [half-step](#).

20.



Whole Tone Scale

The whole-tone scale has six notes separated from one another by a [whole step](#).