AN INTRODUCTION TO MUSIC THEORY

KWASI GYEBI -TWENEBOAH

Noyam

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DEDICATION

This book is dedicated to my lovely sister, Ataa Konadu Tweneboah. Thank you for all the help and support over the years. May God richly bless you.

ACKNOWLEDGEMENT

I acknowledge the immese contribution of Very Rev. Maxwell Tweneboah Koduah and Mrs. Paulina Tweneboah Koduah for their encouragement and guidance. I also thank Dr. Augusta Arko Mensah, Head of Music Department, University of Eudcation Winneba. Lastly, special thanks goes to Kwasi Poku-Tweneboah.

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PREFACE

Hefler and Przybylek (2022) defined music theory as the sound that has been creatively organized. They further went on to state that "music theory involves various fundamentals such as melody, texture, rhythm, pitch, keys and clef."[1] Music theory can also be defined as the building block of music. This book deals with the different components that combine to make good music. Although the theory found in this book has its principle in Western art music, the principles can be applied to other forms of music.

In order to appreciate music theory, the author has added a music theory practice book. This book is to be used with the theory practice book for more work.

Kwasi Gyebi-Tweneboah,

March 2023

[1] Scarlett Helfer and Stephanie Przybylek, "What is Music Theory?" (2022). https://study.com/learn/lesson/music-theory-overview-concepts-history.html

UNIT 1

What is Music?

Music is one of the subjects that cut across all cultures. Because of this, people call music a universal language. It can also be defined as the correct combination of sounds appealing to the ear and satisfactory to the heart. As a matter of fact, music is always created by the production of sounds. Sounds are produced by vibrating objects. These vibrating objects are perceived by ears. It must be said that the sounds produced in music are different from other sounds. Before a sound produced can be called music, it must meet certain criteria or must have certain qualities. These qualities are called the elements of music.

The Elements Of Music

The elements of music are the qualities a sound should have before the sound can be classified as music. They are the building blocks of music. There are many but we will discuss a few.

- **Beat and meter** - Beats give the music its regular rhythmic pattern. Music should have a regular rhythmic pattern. The easiest way to notice a beat is by how the heart works. The heart gives a regular beat. Meter on the other hand refers to rhythmic grouped patterns . The meter may be duple (2 beats in a measure) triple (three beats in a measure) quadruple (4 beats in a measure) etc. more explanations will be seen when discussing time signatures
- **Dynamics** – Dynamics means the softness or loudness of a piece of music. Sometimes, this is called the volume of the music. Music moves from loud to soft and vice versa. Dynamics are represented by symbols e.g., P, >, <
- **Pitch** - refers to the highness or lowness of a note. Music is written with a combination of low and high notes. It will be explained further under the notation of music notes and melody writing.
- **Melody** - refers to the tune of music. It is derived from playing a series of notes one after the other. A tune is recognized by its melody.
- **Harmony and Tonality** - This refers to the combination of notes or chords played together and the relationship between a series of chords. Harmony accompanies and supports the melody. It is important to note that before a piece of music can be harmonised, there should be a melody. It will be explained under Triads and chords. Tonality, on the other hand, is a language of music in which specific hierarchical pitch relationships are based on a key centre. In other words, Tonality is also called the (scale) sense of the music

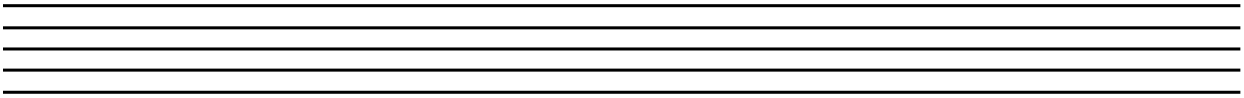
- **Notations** - Any system that represents aurally perceived music through the use of written symbols. That means any system that recognizes all the elements of music through the use of symbols. The two commonly recognized ones are the staff or stave notation and the tonic sofa notation system.
- **Texture** -Texture is the way the melodic, rhythmic and harmonic materials are combined in a piece of music.[2] In other words, texture talks about how the elements of music are combined and what instruments are playing them. Texture can be described as light or denser than the beauty of a piece of music.
- **Rhythm** - Generally means a movement marked by the regulated succession of a strong and weak element. In simple terms, it is the movement of musical notes across time. It will be discussed under Time signatures.
- **Timbre** - This element simply means tone quality. It is that which differentiates one instrument from the other. It is sometimes called tone color.

[2] Bruce Benward and Marilyn Saker, *Music in Theory and Practice* (NY: McGraw-Hill, 2003), 131.

UNIT 2

Staff / Stave Notation

Staff notation is a system of notating music. For the purpose of our studies, we are going to focus more on this system of notating music. The staff consists of 5 horizontal parallel lines.



The Staff / Stave

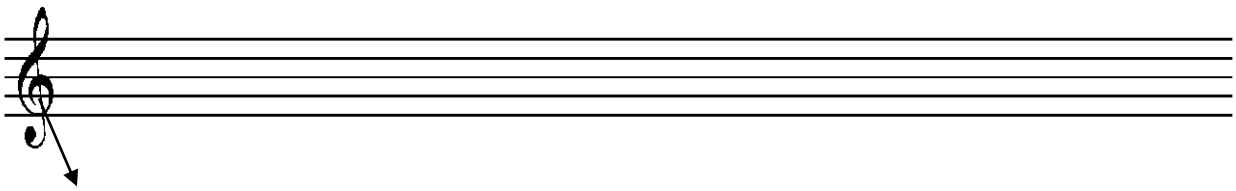
There are several types of staffs/staves depending on the clef that is put on it.

Clef

The "clef" is a French word which means "Key". It is a musical symbol used to indicate the pitches of the staff. It also indicates the names of the lines and spaces. There are several types of clef but for the purpose of our studies, we will be dealing with 4(four) of them. These are Treble, Alto, Tenor and bass clefs. When a clef is drawn on a staff / stave, the name of the staff assumes the name of the clef for example, Treble staff, Bass staff, etc.

The Treble Staff

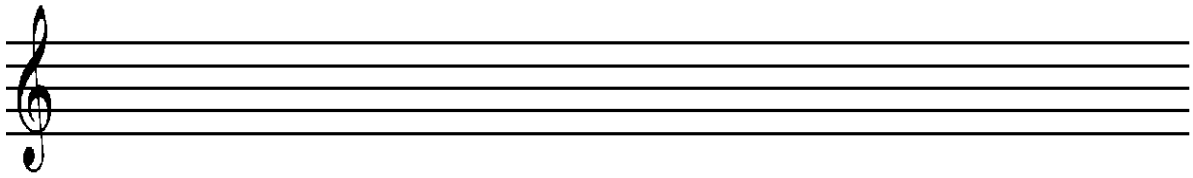
The treble staff has the treble clef written on it. The staff is called treble staff because of the treble clef.



Treble clef

Another name for the Treble clef is the G clef. It is called G clef because it usually starts on the G line.

Treble Staff



Names of the Lines and Spaces of the Treble Staff

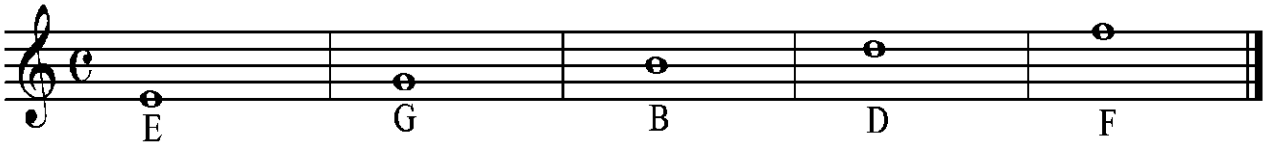
In music, there are letters of the English alphabet. The letters of the alphabet in music are A, B, C, D, E, F, and G. These are the only alphabets in music and they range up to 7 in number. In music, the 8th position will always take you back to where you started and in music, the 8th is also called an ***octave***. E.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

Octave Octave Octave

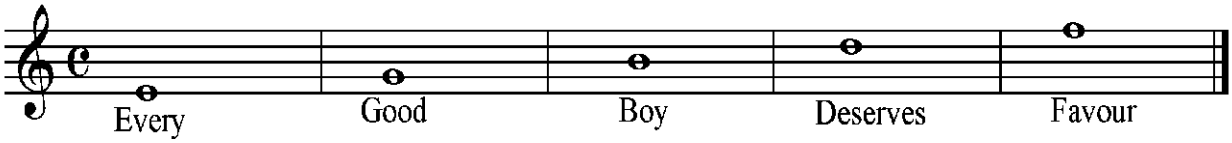
The clef has given the names to the lines and spaces.

The Treble Clef

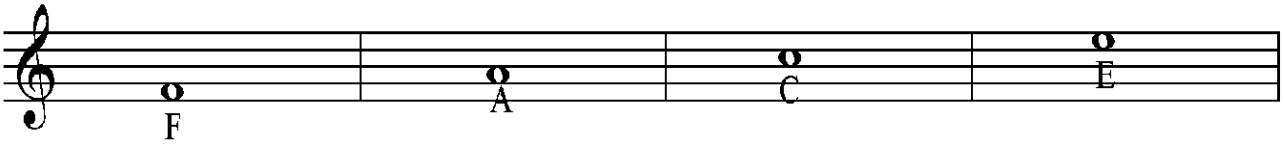
Names of the Lines on the Treble Staff



Some people have devised mnemonics to make the memorization of these lines very simple. Eg;

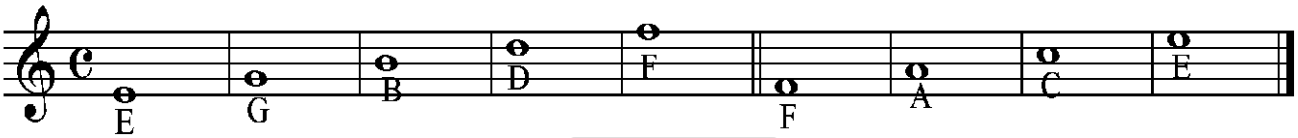


Names of the Spaces of the Treble Staff



A look at the names of the spaces shows that the reading of the acronym **FACE**

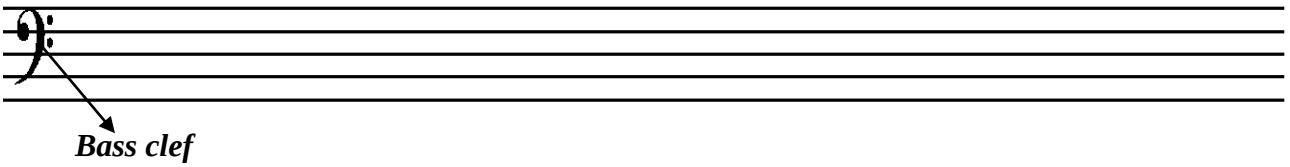
When they are put together this is how it looks.



A critical look at the names reveals that the lines start from E. From E we move to F, from F we move to G, and from G we move to A because, as has been said earlier, the letters of the alphabet in music end at G. So from G we move back to A. From A it continues like that alphabetically.

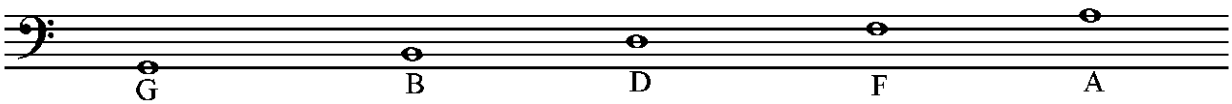
The Bass Staff

The Bass staff has the Bass clef on it. The Bass clef alters the names of the lines and spaces. The Bass clef is also called "F" clef

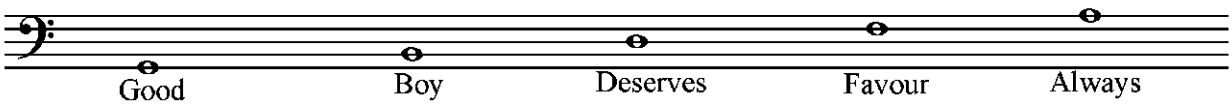


The bass clef is sometimes referred to as ***F clef*** because it starts from the ***line F***

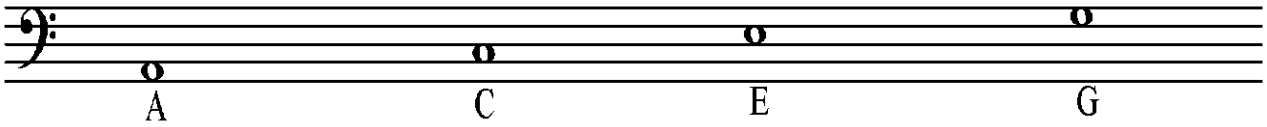
Names of Lines on the Bass Staff



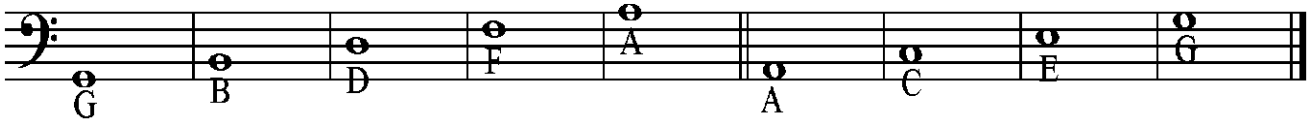
Some people have devised mnemonics for these names because is very important to have these names of the lines in memory. E.G



Names of the Spaces on the Bass Staff

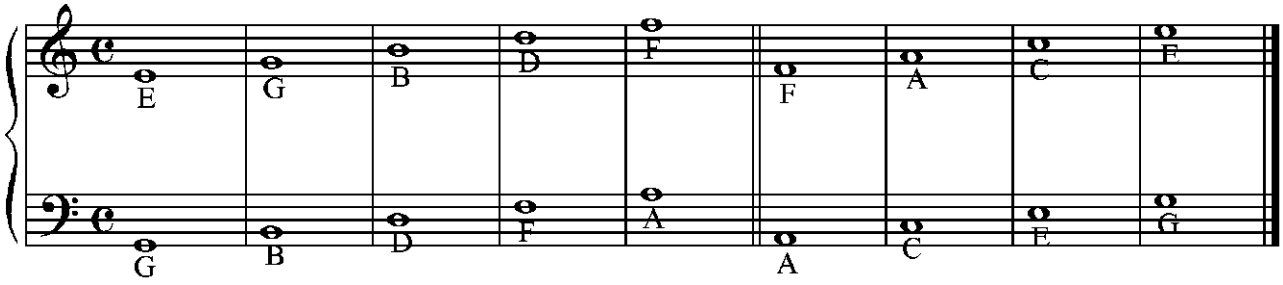


When they are both put together, it looks like this:-



From a careful study, the lines start from G and move to A. This is because, in the alphabet of music, from G, we move to A step by step. It must be emphasized that to be a good musician, the names of the lines and spaces should be memorized very well.

So when the two staffs are put together, it will be like this:-



UNIT 3

Rhythmic Notation

Rhythm is the movement in music across time. Rhythm is at the heart of every music and as such, there is no music without rhythm. The art of writing rhythm down is called rhythmic notation. In staff notation, symbols are used to represent rhythm. Different symbols are used. Below is a chart of the symbols and their names and the duration.

NAME	SYMBOLS	DURATION	REST
Semi-breve / whole note		4	
Minim / half note		2	
Crotchet/quarter note		1	
Quaver / one-eighth note		1\2	
Semi-quaver / sixteenth note		1\4	
Semi-demi-quaver / one thirty-second note		1\8	

The duration of a note is determined by the pulse of the music. Rhythmic notations are also known as musical notes.

Extension of Musical Notes

It must be said that the duration of musical notes can be extended. There are two ways of extending the duration of a note by a dot (•) or a Tie (⁀)

Dotted Notes

A dot in front of a note prolongs the note by half the original value. E.g. 

The original value of a crotchet is 1 and half of 1 is ½ so the value of a dotted crotchet is $1^1/_2$, another example.  The original value of a minim is 2 and half of 2 is one (1) so the new value is (3) (1+ 2 = 3)

It is the combination of all these notes that give us beautiful and good music.

Time Signatures

Is a notational convention that indicates the beats and the baring of notes. It is written with two figures like a fraction but it is not a fraction. $\frac{2}{4}\ \frac{3}{4}\ \frac{6}{8}$

The lower figure represents the beats of the music while the upper figure represents the number of beats in a bar. It is usually found at the beginning of a music piece right after the key signature.

Types of Time Signatures

There are about seven (7) types of time signatures. These are

1. Simple
2. Compound
3. Complex
4. Mixed
5. Additive
6. Fractional
7. Irrational meters

For the purpose of our studies, attention shall be given to only two (2) compounds and simple time.

Simple Time Signature

Simple Time signatures are the time signature that has the crotchet as a beat. It usually has 4 as the lower figure. For example. $\frac{3}{4}$ The lower figure represents the beat which is in relationship with the whole note (semi breve) and the upper figure represents the number of beats in a bar. The beat is usually in a crotchet one. Examples of simple time signatures are $\frac{2}{4}\ \frac{3}{4}$

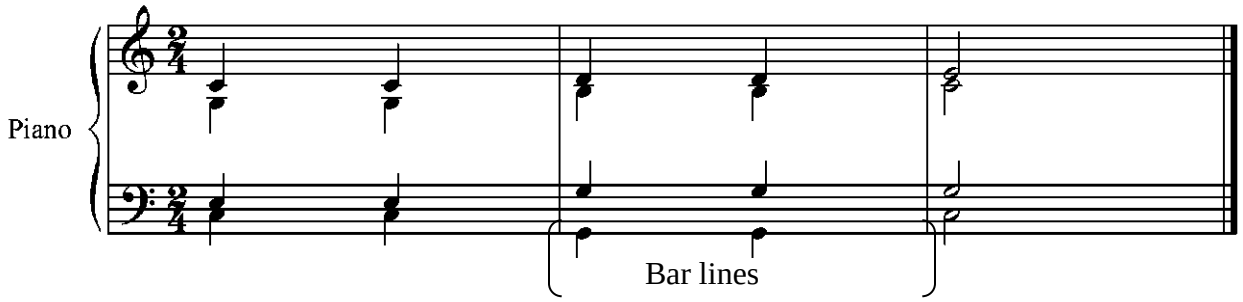
Compound Time Signature

This is a type of time signature that has quaver () as the beat. It usually has eight (8) as the lower note. The 8 represents the number of quavers that makes a whole note (semi breve) (0) the figure 8 represents the beats of the music and the upper figure represents the number of beats in a bar. Examples $\frac{6}{8}\ \frac{5}{8}$

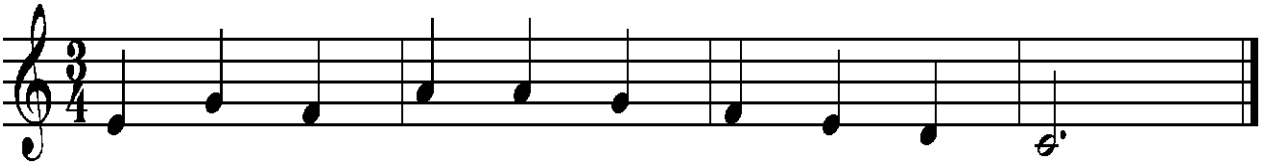
Sometimes, Time signatures are also referred to as Duple, Triple and Quadruple. For example $\frac{2}{4}$ is also called Simple Duple Time. This is referred to as simple because it falls among the simple time signatures and the duple is the upper figure. Likewise is also referred to as a simple triple time.

Barring of Notes

The time signature helps to bar the notes; Barring is the act of dividing music into sections with the help of bar lines.

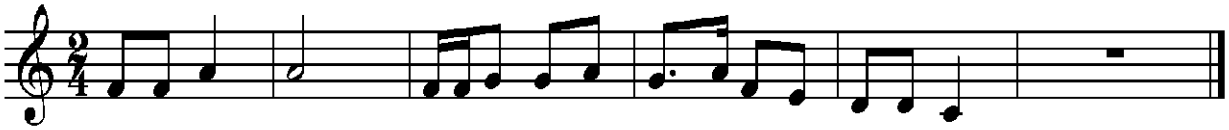


Barring is very important in staff notation because it makes reading easy. The time signature helps in baring the notes. The lower figure represents the beats and the upper figure represents the number of beats in a bar. E.g: $\frac{3}{4}$ time means 3 crotchet beats in a bar.



The above examples are under the barring of simple time signatures.

One important thing that one must understand is that the note values must be up to the number of crotchet beats in the bar. For example,



From the above example, the notes in bar 1 are two quavers which add up to 1 crotchet and the next note after the two quavers is a crotchet which completes the bar.

The second bar has one minim and the bar is complete. Remember that two crotchets make up a minim. This means that we have 2 crotchets in that bar.

The most important thing with the barring of music notes is that depending on the time signature, the notes in the bar must correspond with the number on the top of the time signature.

For more exercises refer to the workbook

Accidentals

An accidental is a note which is not a member of the scale or mode. In other words, an accidental alters the pitch of a note. In staff notation, symbols are used to represent accidentals. These symbols are:

- Flat (♭)
- Sharp (♯)
- Natural (♮)

Flat ( )♭

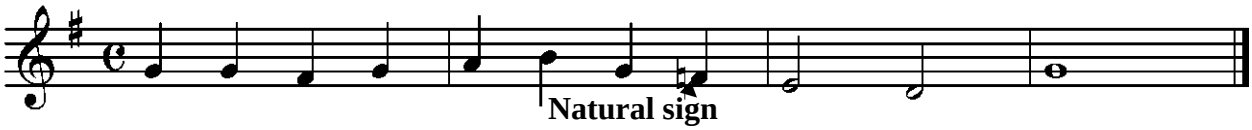
A flat lowers a note by a semitone (in tonal harmony, a semitone is the shortest distance between two notes).

Sharp (#)

A sharp (#) increases a pitch of a note by a semitone (in tonal harmony).

Natural **(♮)**

A natural sign put in front of a note restores a note to its original position.



Key Signature

Key signatures are a set of sharps (♯ and flats (♭) which are put together on a staff. Key signatures are usually found right after the clef at the beginning of music although sometimes they appear at other places on a piece of music usually after a bar line. Key signatures alter the pitch of the notes that they affect. There are two types of key signatures these are

(a) ***sharp keys***

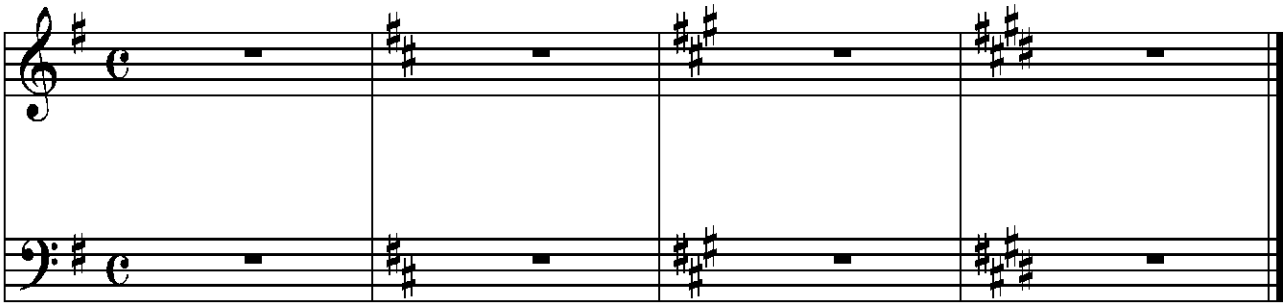
(b) ***flat keys.***

Below is a list of all the key signatures.

Sharp Keys

Key Signature	Number Of Sharps	Letters That They Affect
G MAJOR	1	F
D MAJOR	2	F, C
A MAJOR	3	F, C, G
E MAJOR	4	F, C, G, D

This is how they stand when they are put on the staff:



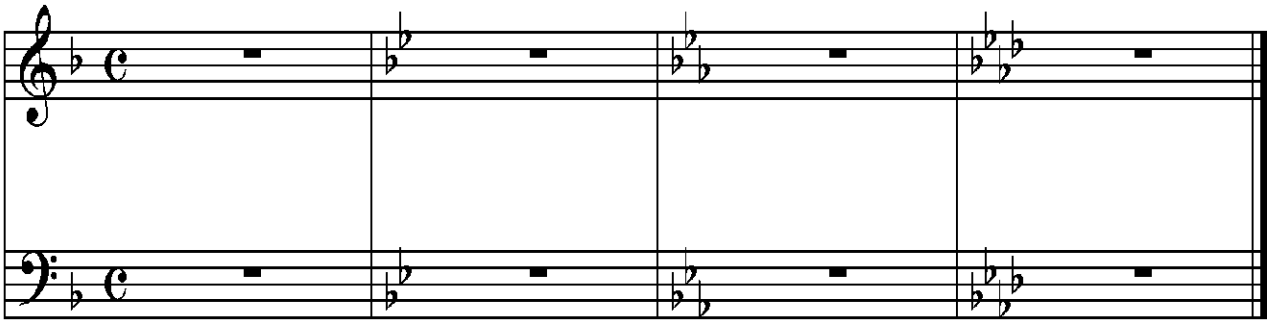
- Look carefully at where the accidentals are put. They are put exactly where the key signature is affecting.

Flat Key Signatures

Key Signature	Number Of Flats	Letters That They Affect
F MAJOR	**1**	**B**
B♭	**2**	**B, E**

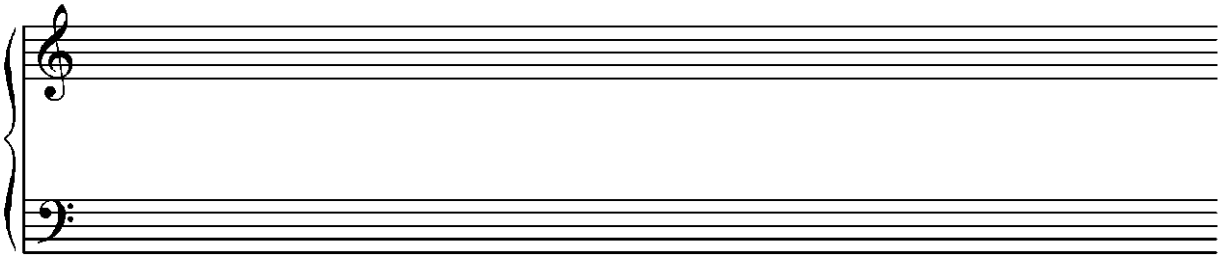
E ♭	**3**	**B, E, A**
A♭	**4**	**B, E, A, D**

This is how they are represented on the staff



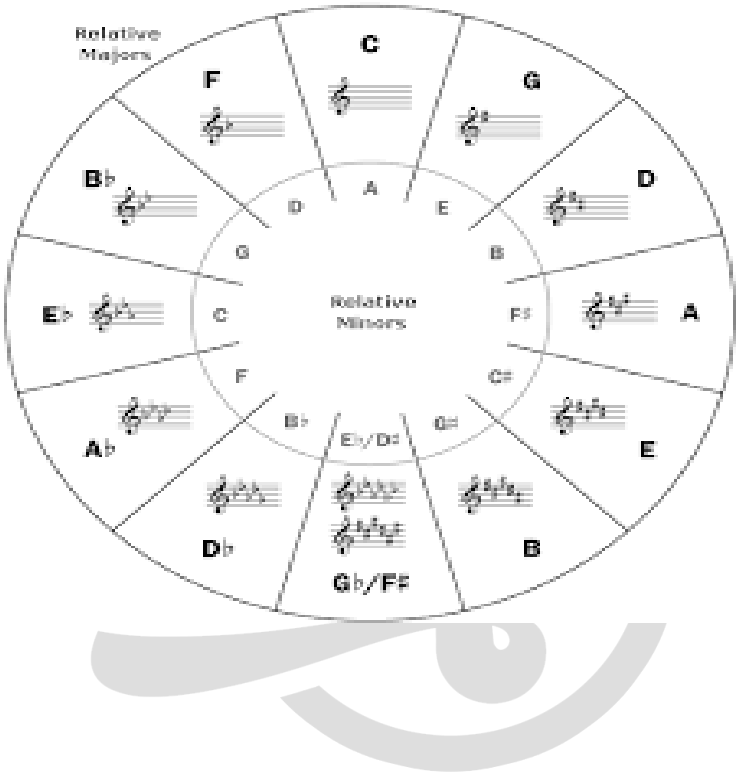
A critical look at the above keys shows that the keys are put exactly where they should be.

It must be pointed out here that it is only key C major that does not have a flat or a sharp key signature. Due to this, the key C major is also called the ***natural key.***



Circle of fifths

This term is used to show the relationship between all the 12 tones of the chromatic scale, their corresponding key signatures and the associated major and minor keys. Below is a circle of fifths diagram.



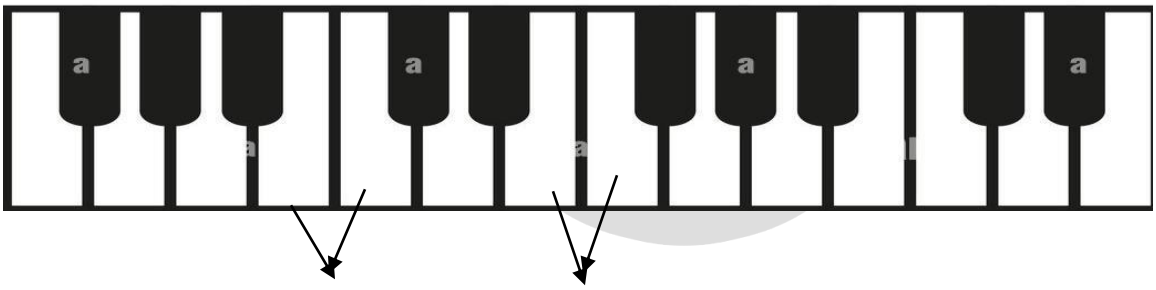
UNIT 4

The Keyboard of Piano

The piano is an acoustic instrument, this means its sound is produced and amplified physically. in comparison, keyboard is an electronic instrument with variety of volume option and often can produce electronic sounds like strings, organ, synthesizers and more. The keyboard piano or keyboard is made up of black and white keys. The white keys on the keyboard is called Naturals whiles the black keys are called accidentals. The white keys of the keyboard are named after the first 7 letters of the English alphabets: **A-B-C-D-E-F-G.** The black keys on the other hand has no names on their own but are dependent on the white keys closest to the black keys.

With the white keys, semitones occurs naturally between **E, F** and **B,C.** The keys on the keyboard are organized in a distinctive 12 notes pattern that repeats itself on the board. These twelve notes are C, C sharp (D flat), D, D sharp (E flat) E, F, F sharp (G flat) G, G sharp (A flat) A, A sharp (B flat).

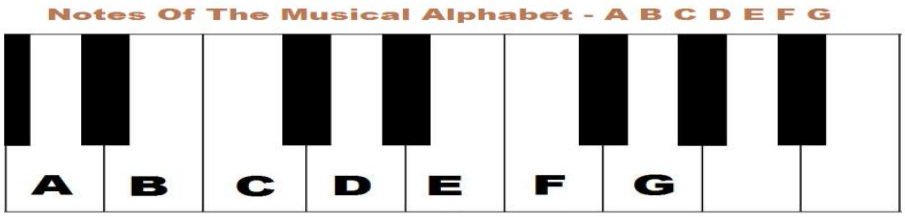
Structure of the Keyboard



Semitone semitone

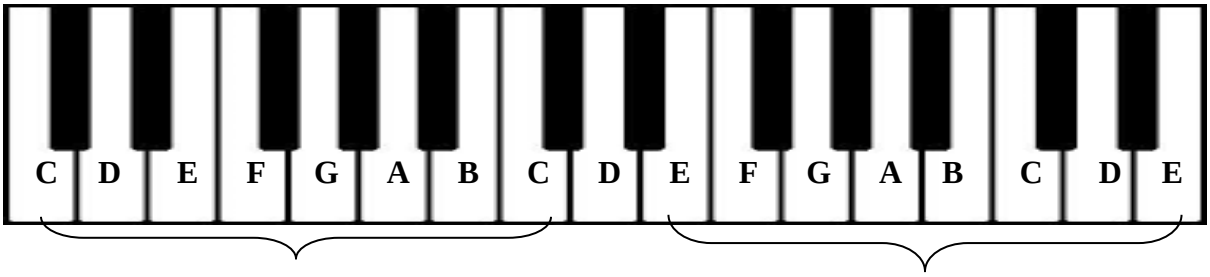
Identifying alphabets on the keyboard.

As already discussed, the alphabets on the keyboard can be found on the white keys or the natural keys.



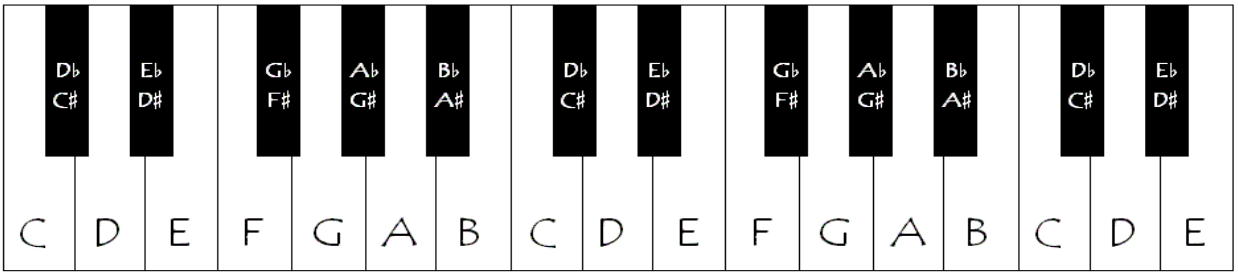
An Octave

An octave is the 8th of a scale. As already discussed, there are 7 English alphabets in music which starts from A to G. The octave will always take you to the beginning of the alphabets. For example, the octave of A is A.



Accidentals on the keyboard

As already discussed, the black keys on the keyboard are called accidentals. As already stated, the accidental keys take their names from the natural keys that is closest to it.



UNIT 5

Scale Constructions

A scale is a set of fixed intervals between notes. A scale ordered by increasing pitch is an ascending scale while descending scales are ordered by decreasing pitch. There are several types of scales but for our studies, we will be concentrating on the **major** and **minor** scale constructions. These two types of scales have eight (8) notes. When discussing the scale, what really comes into mind is do, ray, me fa, so, la, ti.

Technical Names of the Levels of the Scale

The scale is made up of eight (8) notes and each level of the scale has its technical name. The first note of the scale which is the beginning of the scale is called the ***tonic.*** The next which is the second (re) is called the ***super tonic.*** From these, we move to the third(3rd, me) which is called ***medient.*** The next available note is the 4th (fa) which is called ***subdominant.*** From that we move to the 5th (so) which is also called ***dominant,*** and then we move on to the 6th (la) which is called ***subdominant.*** The last note, which is the 7th (te) is called the ***leading note.*** From there we move back to the root.

1st (do) - tonic

2nd (re) - super tonic

3rd (me)- medient

4th (fa) - subdominant

5th(so) - dominant

6th(la) - sub medient

7th(te) - leading note

Major Scale Construction

There are two ways of constructing a scale; these are the key signature method or the interval structure. The major scale has eight members.

Construction of a Major Scale Using Inter-Valid Structure

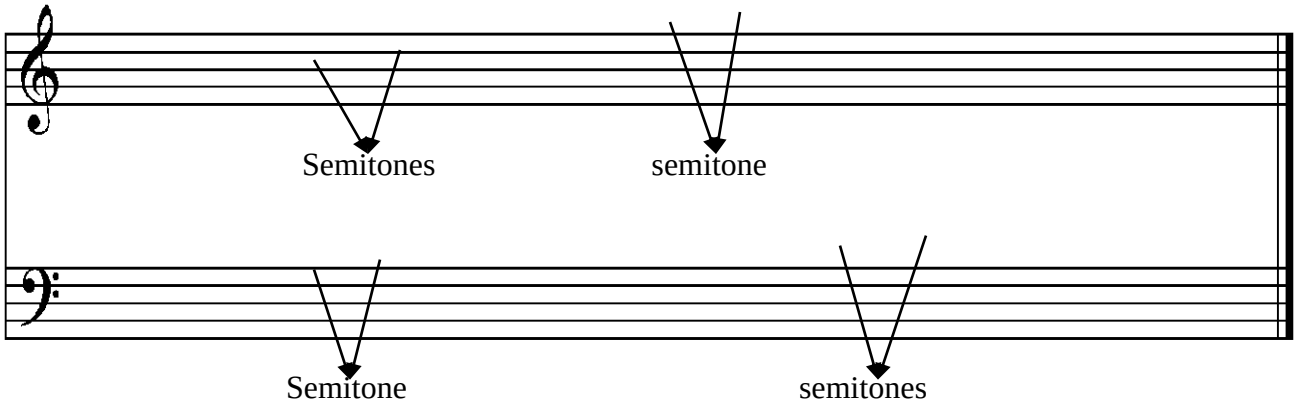
With this method, the following terms must be understood very well.

Semi-Tone And Tones

Semi-tone: In tonal harmony, a semitone is the shortest distance between two notes. This means that if one stands on C and moves to C#, the person has moved a semitone. It is the difference in pitch between a note and the next nearest note.

Tone: In tonal harmony, the tone is a combination of two semi-tones. So, for example, if one is on C and moves to D straight, the person has moved a full tone. This is because moving from C to C# is a semitone and from C# to D is also a semitone. Two semi-tones make up a full tone or a tone.

This is represented by the staff. On the staff, semitones occur at E and F and B and C.



It must be pointed out here that on the staff, a movement from any E to F is a semitone while a movement from B to C is also a semitone. Apart from this, any movement from one letter to the next available letter is a tone. E.g. F to G, C to D, D to F

To construct a major scale, one needs to have the interval structure of

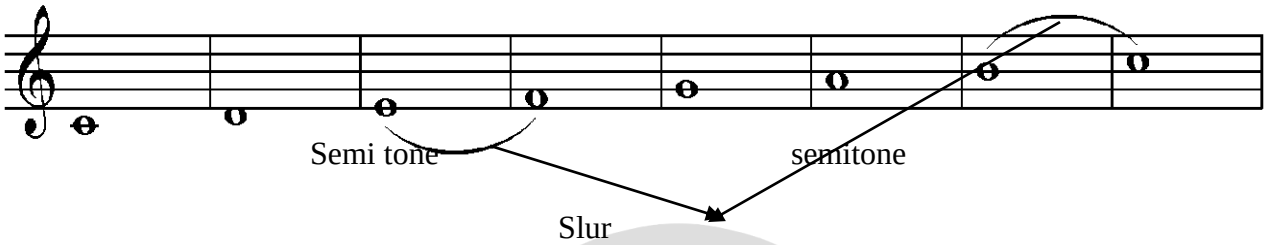
tone, tone, semitone, tone, tone, tone, semitone

T T ST T T T ST

In both ascending and descending order.

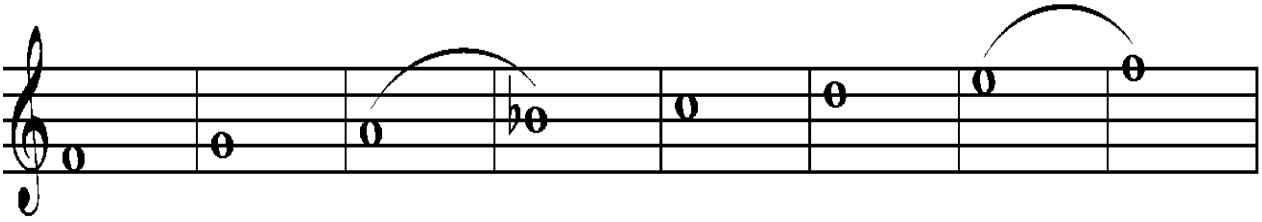
Construct The "C" Major Scale On The Treble Staff Ascending (Without Key Signature)

It must be understood that when one is asked to construct a scale, the scale must start from the name of the scale. In this example, the scale should start from "C" because the question says to construct the "C" major scale. It must also be said that the major scale always has eight (8) notes, starting from the tonic to the octave.



From the above scale, the interval between "C" and "D" is a tone. The interval from "D" to "E" is also a tone. From "E" to "F" is a semitone (remember that a semitone occurs between E and F and B and C). From "F" to "G" there is a tone, from "G" to "A" is a tone. From "A" to "B" there is a tone and from "B" to "C" is a semitone. Another critical look at the scale reveals that the semitone appears between "3rd " and "4th " and "7th" and "8th". The semitones appear between the 3rd and 4th and 7th & 8th in all major scales.

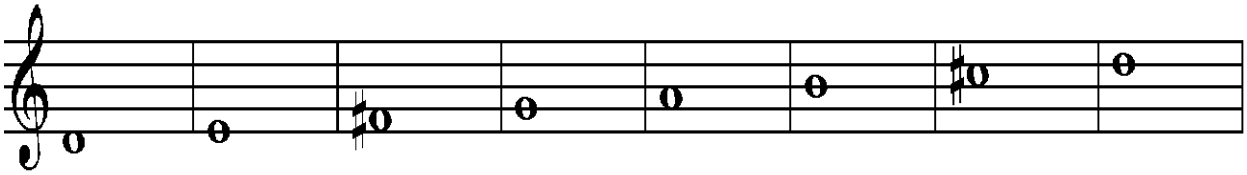
Construct The "F" Major Scale On The Treble Clef Without A Key Signature, Ascending



From the above scale, the scale starts from "F" because the name of the scale is "F" major. From "F" to "G" is a tone. From "G" to "A" is a tone, and from "A" to "B" is a tone but according to the formula, a semitone is needed. So the "B" has to be lowered with the *help of a flat (refer to notes on accidents). So it will become "A" to "B^{b}" (pronounced B flat) which will give a*

semitone. Remember that because of the flat (b) on the B, the "B" has been lowered by a semitone. So from "Bb" to "C" is now a tone (remember that from "B" to "C" is a semitone). From "C" to "D" is a tone. From "D" to "E" is a tone. From "E" to "F" is also a semitone which completes the scale. It must be said that the semitones occur between the 3rd and "4th and the "7th " and "8th".

Construct The D Major Scale On The Treble Clef Without A Key Signature.



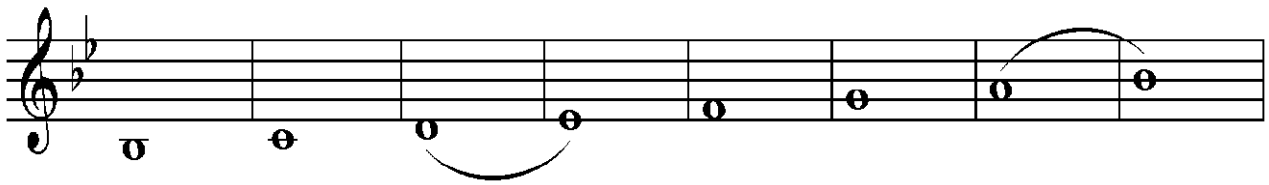
Like what happened in the other scales, the scale starts from D because that is the name of the scale. From "D" to "E" is a tone, and from "E" to "F" is a semitone but according to our formula, we need a tone so the "F" has to be pushed a semitone with the help of a sharp (#) so from E to "F#" is a tone. From "F" to "G" is a tone but because "F" has been sharpened already (F#) it is now a semitone so from F# to G is a semitone. From "G" to "A" is a tone from "A" to "B" is a tone. From "B" to "C" is a semitone but we need a tone so, we move the "C" a semitone up. This can be done with the help of a sharp (#), so from B to C# is a tone. From C to D is a tone but because the C has been sharpened already, from C# to D is a semitone.

**** For more exercises, refer to the workbook.***

Using Key Signatures to Construct Scales

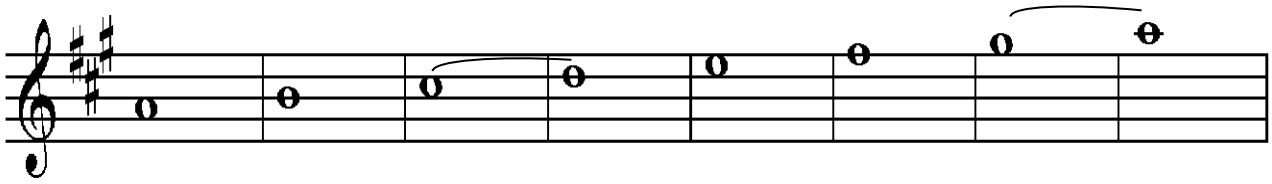
Another way of constructing the major scale is by using the key signature method. This method of constructing the scale is straightforward. e.g.

Construct the Scale of B^b Major on a Treble Staff With Key Signature



With this method, it is the key signature that helps in constructing the scale. After writing the key signature, one has to put the notes beginning with the name of the question. For example, if the question says t the scale of Bb major should be constructed with the help of the key signature, after writing the key signature at the beginning of the music, one has to put the notes I from B to its octave.

Construct the Scale of a Major one the Treble Clef Ascending



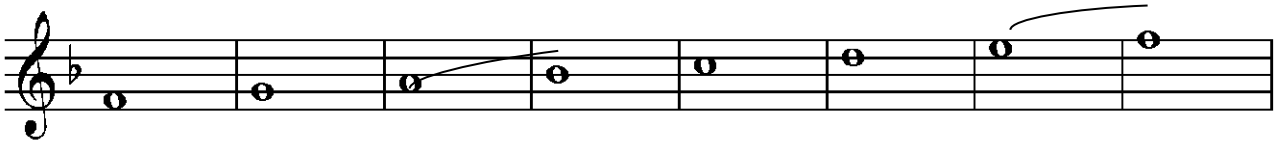
Like the other scales, after putting the 8th notes on the staff, starting from the name of the key, the accidentals are put at the notes where the accidentals affect. In the Key of E^{b,} the accidentals are on "E", "A" and "B". Therefore after constructing the scale, just put the accidents on the notes.

<u>For examples, refer to the workbook</u>

All the above examples are constructing scales with key signatures.

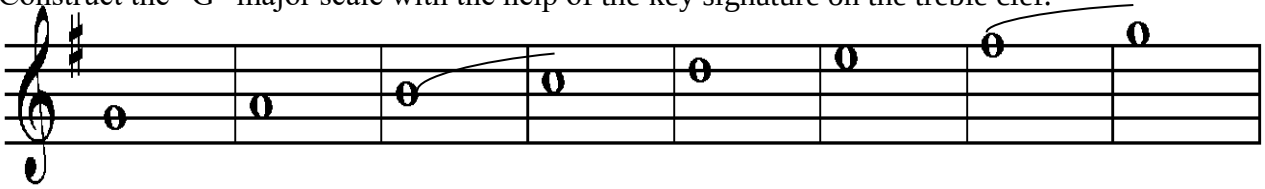
Constructing a scale with a key signature means that, you construct the scale with the help of a key signature. In music, key signatures are written just after the clef.

Eg (1) construct the scale of F major using the key signature on the treble clef in ascending order.



With this type of scale construction, the key signature is put on the staff. The scale starts from the name of the key to the Octave where we started. **Remember, it is the key signature, so do not put the flat on the note but the flat is on the key signature.**

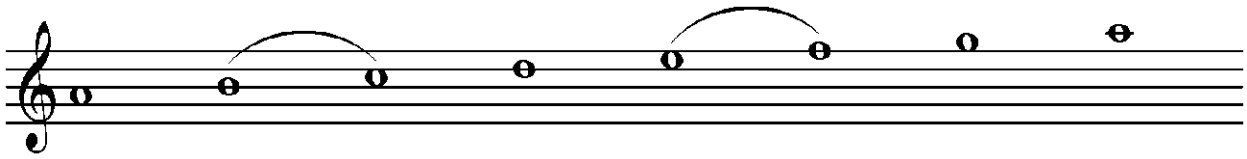
Construct the "G" major scale with the help of the key signature on the treble clef.



With this explanation, with the help of a key signature, just start from the name of the key to its octave. Do not forget to put in your key signature. For more examples, refer to the workbook.

Minor Scales

A minor scale is a diatomic scale with notes separated by whole tones except for the second (2^{nd}) and third (3rd) and fifth (5^{th})and sixth (6^{th}). In other words on a minor scale, the semitones occur between 2^{nd} and 3^{rd} and 5^{th} and 6^{th}. This occurs on a natural minor scale.



Minor Semitones (natural minor)

Like the major, natural minors also begin from the name of the scale e.g. A natural minor will start from "A" and end on its octave higher. In tonic sol-fa notations, there are two ways of singing in the minor. These are:

(1) La – mode
(2) Do – mode

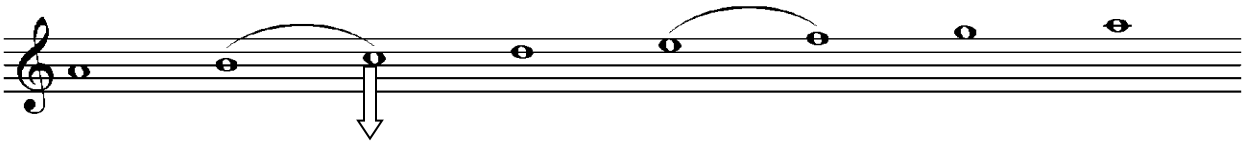
With the *la* mode, the music starts from *la* so in singing it will be *la, te, do, ray, me, fa so, la*.

In "do" the scale will start from do. Remember that, in the minor scale, from the tonic to the 3^{rd} is a minor 3^{rd} interval. So it will be, *do, ray*, ***ma***, *fa*, *so, la*, *ta*, *do*.

There are two types of minor scales

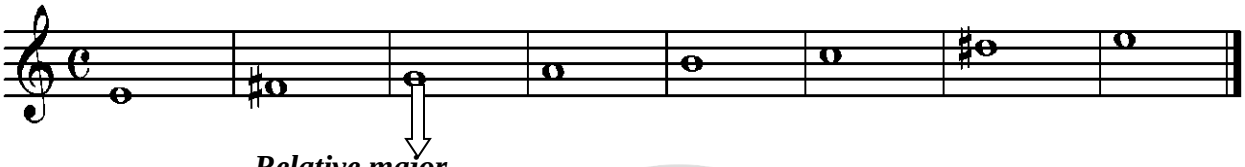
(a) Harmonic minor scale and
(b) Melodic minor scale

Another thing that must be understood is tha, with minor scale, they always have their relative majors. It is very easy to construct a minor scale if one is able to relate the major key; one must be able to relate the minor to the major. In order to find the relative major of a minor scale, after putting the eight notes from the name of the scale to its octave, the minor 3^{rd} is usually, the relative major. The interval structure of the 1^{st} 2^{nd} 3^{rd} notes should be T, S, T.



Relative major

With the example above, the A natural minor scale, from A to B is a tone and from "B" to "C" is a semitone, so is the 3rd note that gives the name of the relative major. In this case, the relative major is "C" so the relative major of A minor is C major. This means that A minor takes the key signature of C major. Another example is E minor.



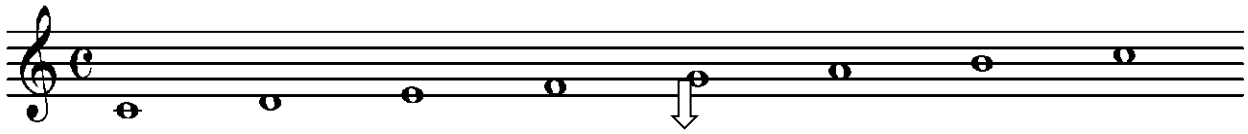
Relative major

As is the other minor scale, the first interval structure is from E to F which is a semitone but we need a tone ,therefore, we have to push the "F" forward with the help of a sharp. From F to G is a semitone. The 3rd note gives the name of the relative major. So the relative of E minor is G major. Below is a list of all majors with their relative minors.

NAME OF MAJOR KEY	NAME OF RELATIVE MINOR
C	A
D	B
E	C#
B	G#
F#	D#
C#	A#
F	D
B♭	G
E♭	C
A♭	F

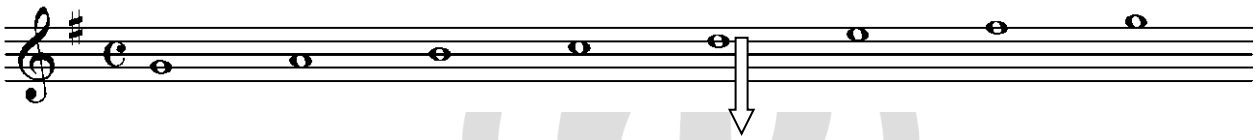
D♭	B♭

When one is on a major scale and wants to find the relative minor, the person must count to the 6th degree of the scale of the major scale.



Relative Minor

With the above example, the 6th degree of the scale is A, accordingly, the relative minor of C major is A minor. Another example:



Relative Minor

In the above example, the key is G major. The 6th degree of the scale is E. This means that the relative minor of G major is E minor.

For example, refer to the music workbook

Construction of a Minor Scale

There are two types of minor scales.

1. Harmonic minor
2. Melodic minor

There are two methods of constructing a major scale:

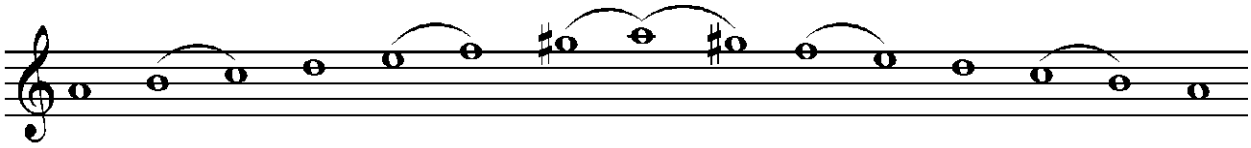
1. Using the interval structure of the scale
2. Using the relative major method

Harmonic Minor Scale (Construction)

First, we will use the interval structure method.

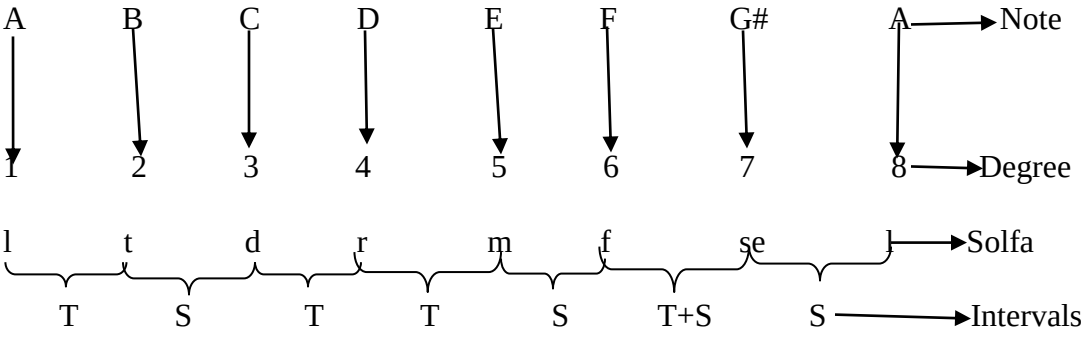
The harmonic minor has the following interval structure; Tone, semitone, tone, tone, semitone, 11/2 tones, semitone. In ascending, the interval structure is the same as descending.

E.g. (1) construct the scale of a Harmonic minor ascending and descending on the Treble clef on the treble staff without a key signature.



From a look at the scale above, it will be seen that the scale starts from A because the question says we should construct the scale of "A" harmonic minor. The scale must have eight (8) members, that is from A to its octave. After that, we start to look at the interval structure of the scale. From "A" to "B" is a tone. From "B" to "C" is a semitone, From "C" to "D" is a tone. From "D" to "E" is a tone, From "E" to "F" is also a semitone, and From "F" to "G" is a tone but according to our formula, we need 11/2 tones. So with the help of a sharp, we push the G a semitone. When the semitone is added to the tone, we get 11/2 tones. So from "F" to "G#" is 11/2 or three semitones. From G to "A" is a tone but because the sharp has affected the "G", the interval is now between G# to A which will give us a semitone. This then concludes the scale. When descending, whatever was done to the left will also be done to the right. After construction, the semitones must be shown with the help of a slur. In the harmonic minor scale, the semitones occur between the 2nd and 3rd, 5th and 6th and the 7th and 8th.

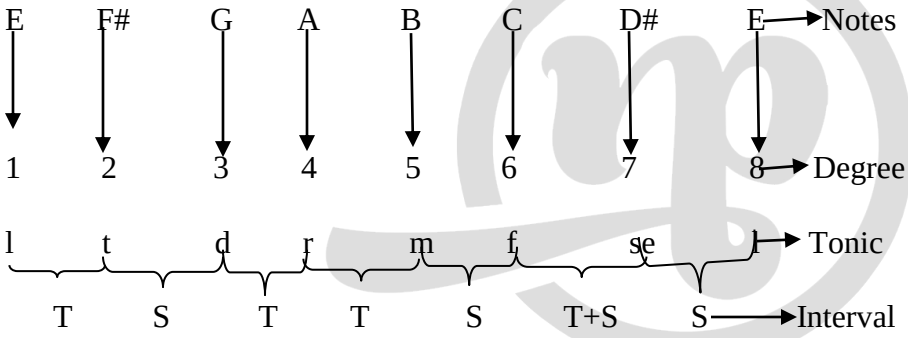
A Harmonic Minor Scale



2. Construct the scale of E harmonic minor ascending and descending on the treble staff without using a key signature.

From the above construction, we started from E because the question says we should construct the scale of E minor Harmonic. From E to F is a semitone, but according to the formula, we are using the interval there shall be a tone. So we push the F by a semitone so from "E" to "F#" now becomes a tone. From F# to "G" is a semitone. From G to A is a tone. From A to B is also a tone from "B" to "C" is a semitone. From "C" to "D" is a tone but we need 11/2 tones. So the "D" will be pushed a semitone with the help of a sharp. So from "C" to "D#" is 11/2 tones. From "D" to E is a semitone which B completes the scales.

E Harmonic Minor Scale



For more examples, turn to the music work book!

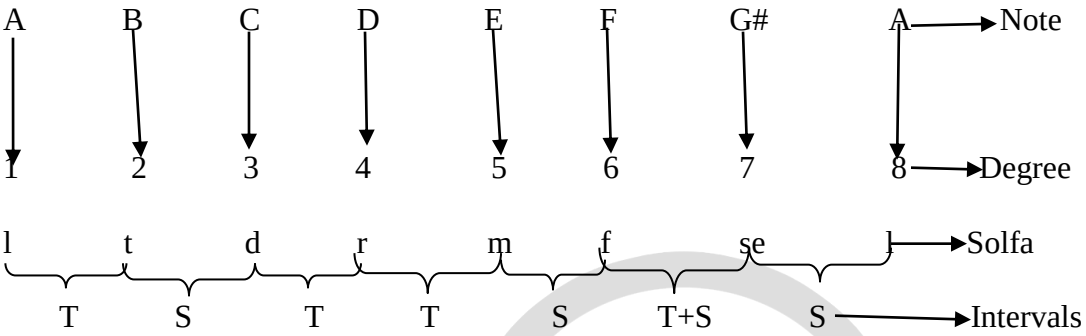
Using relative major to construct a minor scale

As has been said already, all minor keys take the shape of the relative major scale, so with this method of construction the minor scale, the relative major is very important as the notes that the key signature affects. For example,

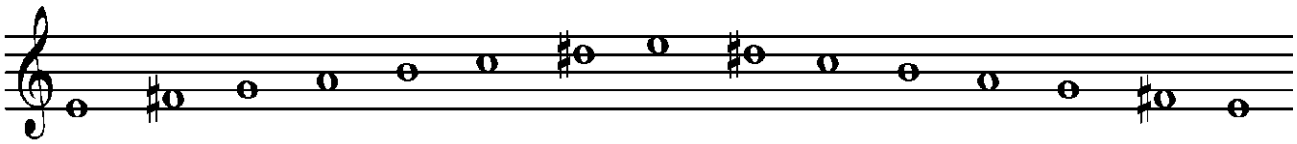
1. Construct the scale of a harmonic minor on the treble staff ascending and descending. Answer: In this example, if learners want to use relative major, first of all, the relative major of the minor scale should be known. In the question above, the relative major of A minor is "C" major. This means that the scale is going to take the shape of the relative major.

From the construction above, the scale is taking the shape of the relative major. But after putting the notes on the staff, the 7th level of the scale is raised as a semitone.

A Harmonic Minor Scale

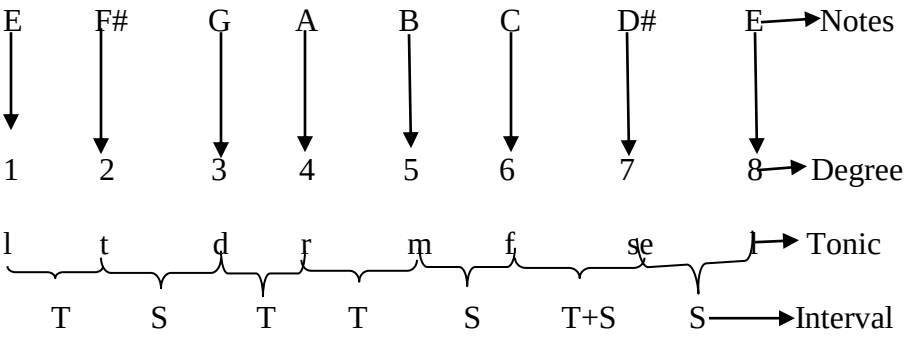


2. Construct the scale of E minor ascending and descending on the treble staff.



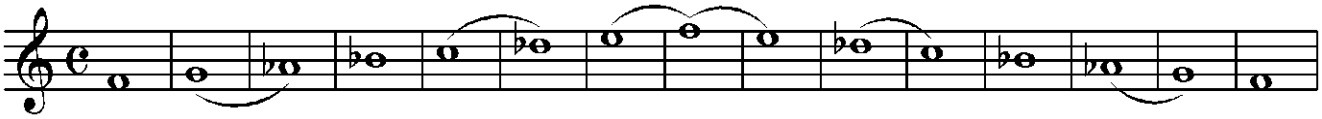
From the construction above, the question says we should construct E harmonic minor. After putting the notes on the treble staff, starting from E to its octave, you then look for the relative major. The relative major of E minor is G major. This means the scale is going to take the shape of G major. In G major F is sharpened. So after putting the notes there, the "F" is sharped. In the Harmonic minor scale, the 7th level of the scale has raised a semitone. Same for ascending and descending.

E Harmonic Minor Scale



It must be noted that when the 7th note in a scale is flattened due to the key signature, the natural sign is used to raise the 7th. Example.

1. Construct the scale of "F" minor harmonic on the treble clef ascending and descending.

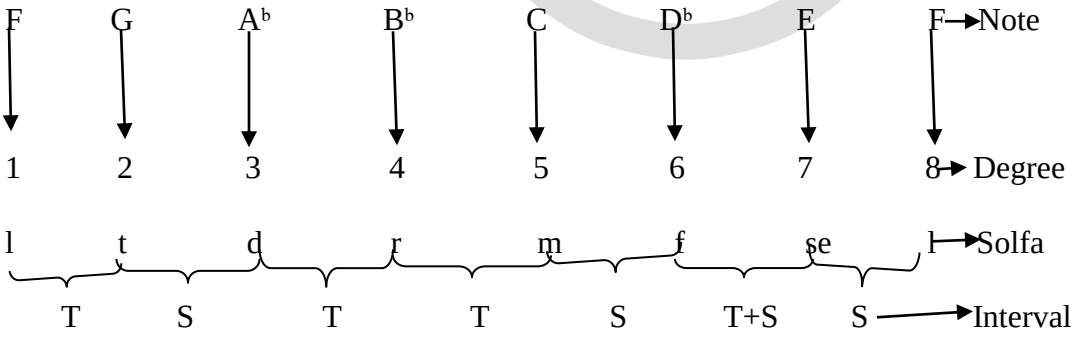


From the above example, the relative major of the "F" minor is A^b major. In A^b major, the flats affect A^b, B^b, D^b and E^b. So after constructing the scale from "F" to its octave "F", the flats are put on A, B, D, and E but because the E is the 7th of the scale, the natural sign is put on the note to raise it a semitone.

NB: The 7th can be raised with the help of either a sharp or natural.

2. Construct the scale of C minor harmonic ascending and descend on the treble clef.

From the above example, the relative major of C minor is Eb major. So after putting the notes from "C" to C, in the key of Eb major, the flats affect E, B and A. So after putting the notes on the staff that is from C to C, the flat are put on E B, and A, but when we reached B, we put their natural to help us raise the notes. We didn't put the B flat on the B because the B is the 7th of the scale, and in Harmonic minor, the 7th is always raised.



For more examples, turn on the music work book

Melodic Minor Scale

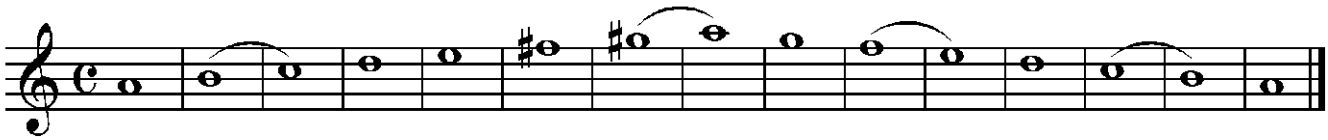
This is another type of minor scale. Just like the harmonic minor, the melodic minor takes the shape of its relative major. With this type of minor scale, the 6th and 7th degree of the scale are

raised when ascending but when descending, the scale takes the form of the relative major. There are also two ways of constructing this type of scale, using inter valid structure or using the relative major.

Inter Valid Structure

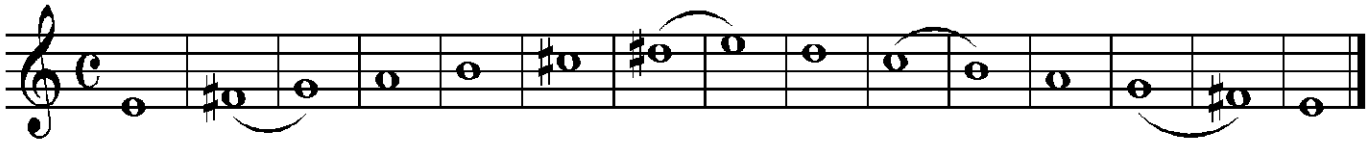
With this method, we use the tones and semitone to construct the scale.

Eg. Construct the scale of A melodic minor descending and ascending in the treble staff without a key signature.



With the example above, it will be seen that the question says we should construct the scale of A minor melodic. So we start from A to its octave. After that, the inter valid construction of T,S,T,T,T,T,S should be obtained. From A to B is a tone, from B to C is a semitone from C to D is a tone, from, D to C is a tone and from E to F is a semitone, but we need a tone, with the help of the sharp (#) the F has pushed a semitone, so from E to F# is a tone. From F# to G is a semitone but we need a tone. So we push the G also a semitone with the help of a sharp. So from F# to G# is a tone. From G# to A is a semitone but when ascending the scale, it takes the shape of the relative major. The relative major of A minor is C major, and the key of C major; there are no accidental. That therefore means the notes are just put from A to its octave lower.

Construct the scale of E melodic minor on the treble clef ascending and descending

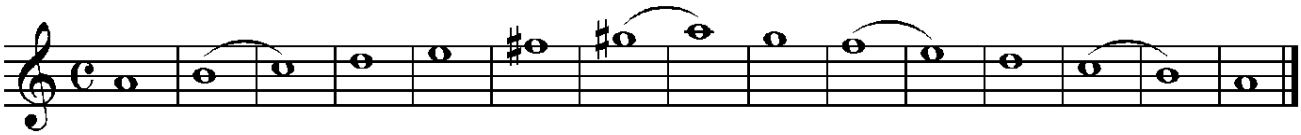


From the above example, from E to F is a semitone but we need a tone so we shift the F up a semitone with the help of a sharp. From F# to G is a semitone from "G" to A is a tone, from A to B is a tone, and from B to C is a semitone but we need a tone, so with the help of a sharp (#) the "C" is shifted a semitone up so from B to C# is a tone, from C# to D# is also a tone. From D# to E is a semitone which completes the scale, but when descending, the scale takes the shape of the relative major. The relative major of E minor is "G" major. In the key of G Major, F is sharpened (#) in descending; the chromatic note will be F#.

Using The Relative Major To Construct The Melodic Minor Scale

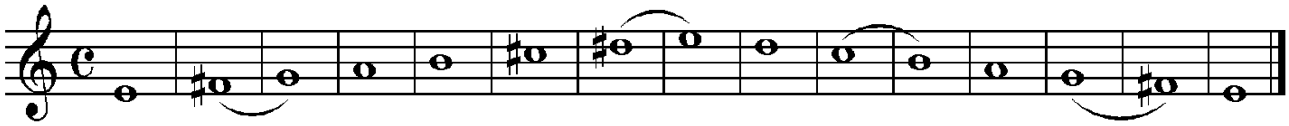
It must be said that minor keys take to structure the relative major. In melodic minor, the 6th and 7th degrees of the scale are always raised with the help of a sharp (#) or natural (#).

Example (1) construct the melodic minor scale of A minor ascend and descending on the treble staff.



With this method, learners should know the relative major of the minor scale. From the example above, the relative major of A minor is C major so after putting the notes on the staff from A to the octave of A, the 6th and the 7th are raised but when descending, the scale takes the shape of the relative major which is C. In the key of C major, no accidentals are affecting the notes.

(2) Construct the scale of E minor melodic, ascending, and descending on the treble staff.



From the above example, the relative major of E minor is "G' major and in G major, F is sharpened, so after putting the notes on it from E to E you then revert to the characteristics of the relative major. In "G" major F is sharpened so the sharp should affect the "F". After that, in the melodic minor the 6th and the 7th are always raised. So you raise the 6th and the 7th. But in descending, the scale takes the shape of the relative major – in this case, the relative major of the "E" minor is G major and in G major, F is sharpened.

Melodic Intervals

An interval is the distance between two pitches. Melodic intervals are derived when notes are played in sequence, that is after the other.

Types of Intervals

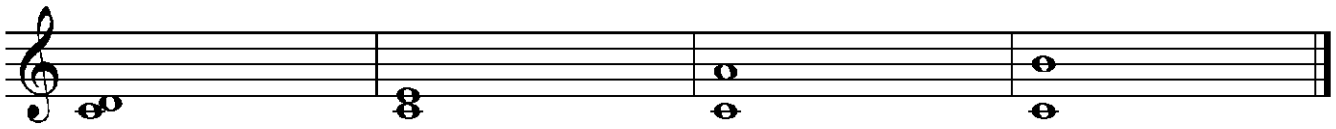
There are 2 types of intervals. These are

1. Perfect interval
2. Major interval

Grouping of Intervals

This shows how intervals are derived
Major Interval

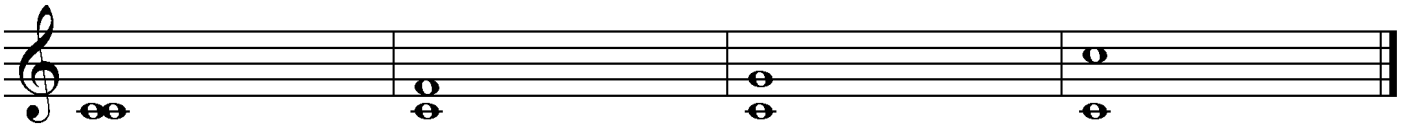
1. 1- ii (do – re)
2. 1 – iii (do – mi)
3. 1 – vi (do – la) major intervals



Perfect intervals

1. 1 – iv (do – fa)
2. 2 – v (do – so)
3. 1 – 1 (do – do)
4. 1 – viii (do do)

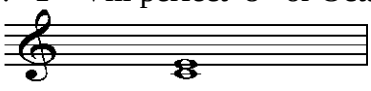
Perfect Intervals



Describing Intervals

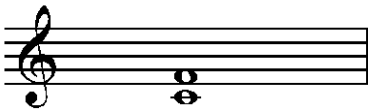
Intervals are described using numbers.

1. I – II – major second (M_2)
2. I – III – major 3rd (M_3)
3. I – VI – major 6th (M_6)
4. I - IV - Perfect 4th (P4)
5. 1-V – Perfect 5th (P5)
6. 1-1 Perfect unison
7. 1 – Viii perfect 8th or Octave

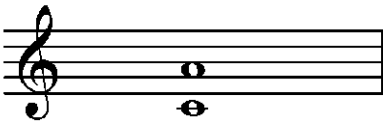
E.g. 

(i) From C to E is a major 3rd (M3) interval. From the staff, it will be seen that from C one must move to D which is a second and the E will be the 3rd from C. Early on we

said that a 3rd falls under a major interval hence a major 3rd (m3) interval.



(II) From C to F is a perfect 4th (P 4th) interval. From C on has to count 4 steps on the staff before that person will reach F hence the number 4. As was said earlier that the number four (do-fa) falls under perfect interval. Hence from C to F is a perfect 4th (P4) interval.



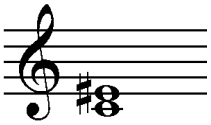
(III) From C to A is a major 6th (M6) interval. From C to A one has to count the 6th steps before the person will reach A ie C,D,E,F,G,A, and earlier on, we said that the 6th falls under major intervals hence from C to A is a major 6th (m6) interval.

Describing Chromatic Intervals

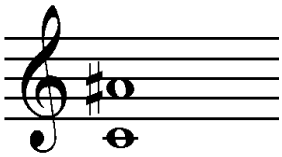
Chromatic intervals are when the intervals are altered with the help of a chromatic sign that is sharp (♯) Flat (♭) or natural (♮)

Augmented Intervals

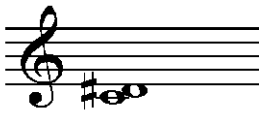
- When a major interval is sharpened for the first time we have an augmented interval e.g.



From the above example from C to E is a major 3rd interval, but because of the sharp which is put on E, the E has raised a semitone which makes the interval a chromatic interval. Therefore, the above interval is an Augmented 3 (Aug. 3rd) interval.



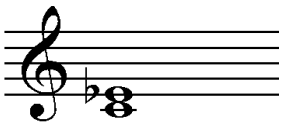
In the example above i. will be an Augmented 6th interval. (Aug 6th) . Originally, from C to A natural will be a major 6th interval but because of the sharp which is affecting the A, the interval is now chromatic hence, an augmented 6th(Aug 6th) interval.



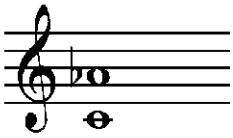
i. In the example above iii is an Augmented second interval (Aug 2nd) from C to D is originally a Major second interval but because of the sharp which is affect D, this interval is now chromatic hence, an augmented 2nd interval.

Minor Intervals

When a major interval is flattened for the first time, a minor interval is got. e.g.



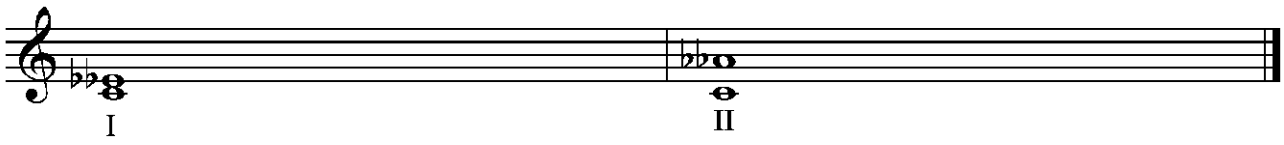
From the above example, i. is a minor 3rd interval From C to E is a major 3rd interval but because of the chromatic note which is E this interval is now a chromatic interval so from C to Eb is a minor 3rd interval (m3).



Example ii. is a minor 6th interval. From C t A is a major 6th interval but because of the chromatic note of A, the interval is now chromatic hence a minor 6th interval. Example iii. is a minor 2nd interval. From C to D is a major second interval but because of the flat affecting the note D, the interval is now chromatic hence a minor 2nd (m2) interval.

Diminish Interval

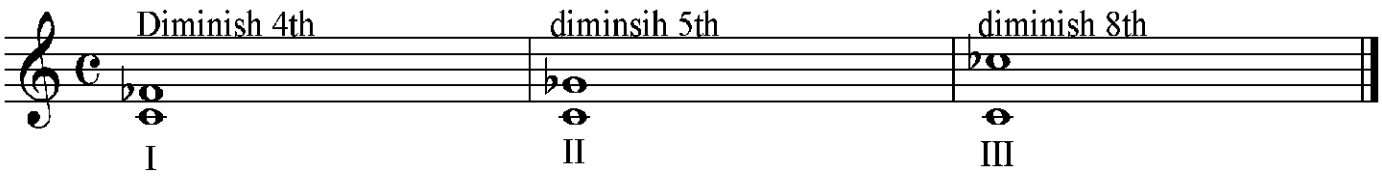
When a major interval is a decrease by 2 flats (bb), it is a diminished interval.
E.g.



I. Is a diminish 3rd interval (Dim 3rd)
II. Is a diminish 6th interval(Dim 6th)

Deriving Diminish Using Perfect Interval

When a perfect interval is decreased by a semitone, a diminished interval is arrived at
E.g.



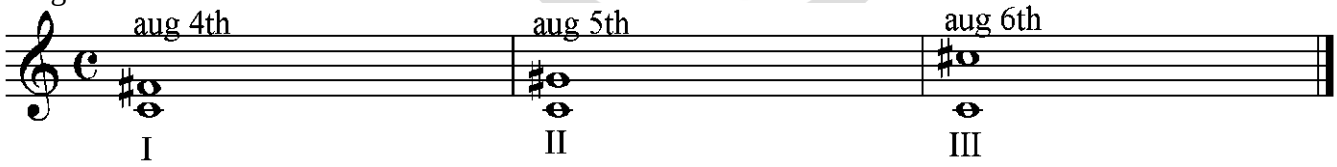
i. is diminish 4th (dim 4th) interval. From C to F is a perfect 4th interval but because of the flat, is now a chromatic interval hence diminish 4th interval (dim 4th).

ii. is a diminish 5th interval. From C to G is a perfect 5th but because of the chromatic note or the b (flat) symbol, it automatically falls under the chromatic interval hence diminish 5th (dim 5th) interval.

iii. is a diminish (dim 8th) interval. From C to C is a major 8th interval but because of the Accidental flat (b) the interval is now chromatic hence a diminish 8th (Dim 8th).

Deriving Augmented Intervals Using Perfect Intervals

When a perfect interval is raised by semitones an Augmented interval is arrived at.
E.g.



ii. is an augmented 5th interval. From C to G is a perfect 5th interval but because of the chromatic which is affecting the 5th (G) this interval is a chromatic interval hence an Augmented 5th (Aug 5th) interval.

i. is an augmented 4th interval. From C to F is a perfect 4th interval. But the accidental is affecting the 4th (F) which makes this interval an Augmented (Aug 4) interval.

iii. is an Augmented 8th (Aug 8th) interval from C to C1 is an Octave which is a perfect interval, but because of the sharp that is affecting the A 8th, the interval is chromatic. Hence Augmented 8th (Aug 8) in summary.

Major Interval - I – 11 (Major 2nd)
I – III (major 3rd)
I – VI (major 6th)

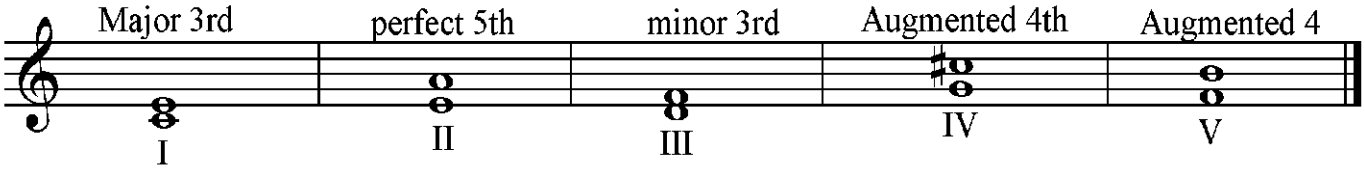
Perfect Interval - I – I (perfect unison)

I - IV (perfect 4th)
I – V (perfect 5th)
I – VIII(perfect 8th or Octave)

Chromatic Interval

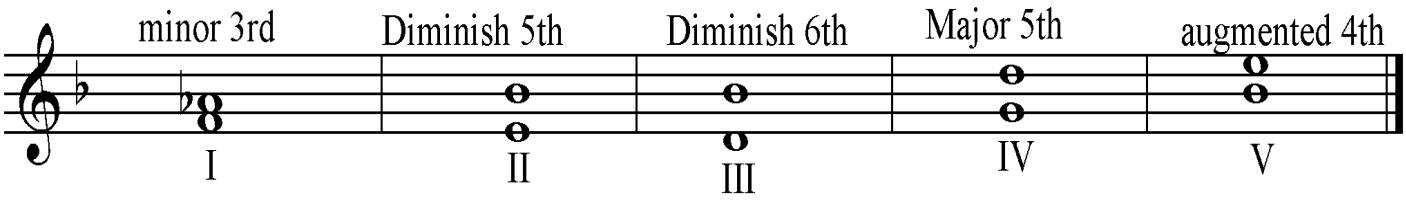
Major

- When a major interval is flattened for the 1st time, is a minor interval.
- When a minor is flattened again, is a diminish.
- When a major is raised, there is an augmented.
- When a perfect interval is raised with a sharp, there is an augmented interval.
- When a perfect interval is flattened, there is a diminish interval. It must be understood that in the melodic interval, the root is usually, the key.



i. is a major 3rd. The root of the interval is C so using this formula from C to E is a major 3rd interval.
ii. is a perfect 4th interval. In the key of E major A is natural and from E to A is a 4th which falls under a perfect interval. Hence a perfect 4th (P 4th) interval.
iii. is a minor 3rd interval. The root of the interval is a D. This means that in that interval, D is the key. In the key of D major F happened but in this interval F is natural. As in earlier chapters, when a sharpened note is sharpened and you want to naturalise it, naturalising is used. However, in this situation, the sharp did not come on the F which means the "F" is naturalised. In other words, the F is flattened and when a major interval is flattened for the first time, we get a minor interval hence a minor 3rd interval.
iv. is an augmented 4th interval. From G to C are 5 counts. The root of this interval is G and in the key of G major "G" is natural. When a perfect interval is raised for the first augment interval, what we get hence an augment 4th interval.
v. Is an Augmented 4th interval (Aug 4th) The root note of that interval is "F". In the key of "F" B is flattened but in this interval B is natural. When a flat is naturalised, it is in effect a sharp and when a perfect interval has raised a semitone, an augmented interval is got hence an augmented 4th interval (Aug 4th).

E.g.

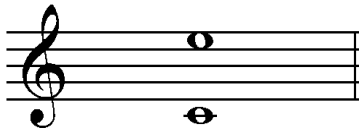


i. is a minor third (minor 3rd) interval: From "F" which is the root to A is a major 3rd interval but because of the accidental (b) this interval is now chromatic and when a major interval is flattened for the 1st time with a flat a minor interval hence a minor 3rd interval.
ii. is a diminish 5th (dim 5th) interval. The root note of this interval is an E from E to B is a 5th. But due to the key signature of the music which is F, is flattened. In a perfect interval, a flattened note brings a diminish interval.
iii. Minor six interval (m 6th). The root of that interval is D in the key of D major the 6th which is B is natural. But in this interval B (because *the music is in F major)* is flattened which automatically makes this interval a dramatic interval hence a major 6th interval.
iv. is an Augmented 5th interval. In this interval the root is G. In the key of G, D is a natural but in this interval; the D is raised by a semitone with the help of a sharp. This automatically makes it a chromatic interval from G to D is a 5th which means a perfect interval and in which a perfect interval is raised, there is an augmented interval.
v. is an augmented 4 interval (Aug 4th) – In this interval, the root is a B because, in the key of F major which is the key signature of the music, B is flattened. In the key of B major e is Flattened but in this key. E is natural which means that the E is sharpened from B to E is a 4th which automatically puts it in a perfect interval. When a perfect interval is raised, there is an augmented interval hence an augmented interval.

For more work and examples, refer to the workbook.

Compound Interval

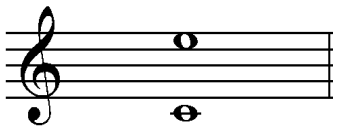
A compound interval is an interval that is more than an octave. Example:



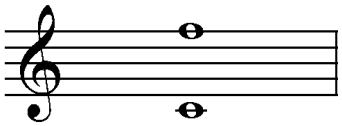
There are two ways of describing an interval. These are

(1) Using their compound names
(2) Using their numerical positions

Using the compound names
With this system, the name of the compound will come first. Form the octave going up is one, then 2 and it continues like that e.g.



From the above example, the interval is more than an octave, so it automatically falls under compound intervals. The above example is a compound major 3rd interval.



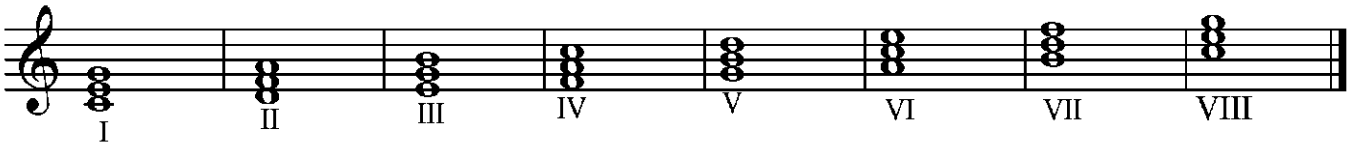
UNIT 6

Triads

Triad is a chord that has 3 members. A chord is when 2 or more notes are played at the same time. Triads form the basis of tonal harmony. Triads are built on all the levels of the scale. Triads are built in 3rds from the root.
In solfa notation, it sounds like the following;

Name of triad	Members in tonic
I	**d, m, s**
II	**r, f, l**
III	**m, s, t**
IV	**f, l, d**
V	**s, t, r**
VI	**l, d, m**
VII	**t, r, f**

On the staff, the above tonic solfa is represented like this:



Types Of Triads

There are 2 types of trials. These are:

- Major and minor Triads are grouped according to the intervals that are between the notes.

Major Triads

Major triads are that type of triad that have a major 3rd interval between the root, 3rd and 5th.

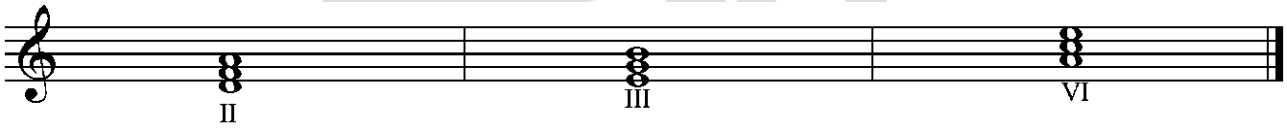
From the above example, the first triad has the root, the 3rd and the 5th. From the root to the 3rd is a major 3rd interval; from the root to the 5th is a perfect 5th interval.
IV- from the root to the 3rd is a major 3rd interval, and from the root to the 5th is a perfect 5th interval.
V – From the root to the 3 is a major 3rd interval and from the root to the 5th is a perfect 5th interval.
This is represented in tonic solfa like following;

Name of triad	Members in tonic sol fa notation
I	**d, m, s**
IV	**f, l, d**
V	**s, t, r**

This means that all the triads that have a major 3rd interval are grouped under major triads.
In summary, the major triads are **I, IV, V.**

Minor Triads

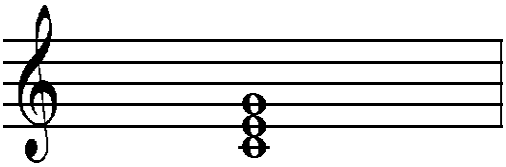
Minor triads are the triads that have a minor 3rd interval.



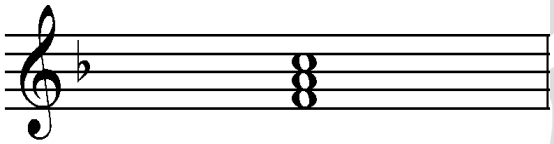
From the above illustration, Triads II, III, VI are all minor triads.
II – The interval between the root and the 3rd is a minor 3rd (refer to notes on intervals) from the root to the 5th is a perfect 5th interval.
III – From the root to the 3rd is a minor 3rd, interval but from the root to the 5th is a perfect 5th interval.
IV – From the root to the 3rd is a minor 3rd interval but from the root to the 5th is a perfect 5th interval.
This can be represented on the tonic sol fat table like this.

NAME OF TRIAD	TONIC SOL FA MEMBERS
II	**r, f l**
III	**m, s, t**
VI	**l, d, m**

In Summary:- Minor trials are II, III and VI
Major chords:- I, IV, V
Minor Chords: – II, III, VI
These chords are the same in any key. Example chord I in F major is a major Triad.



From the above example, the key of the music is "c" major and the triad is at the root position. The members of the triad are C, E, and G.

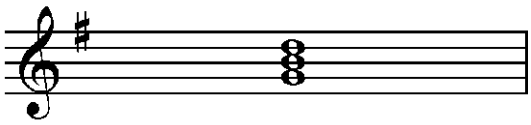


From the above example, the key is "F" major (refer to key signature) so the chord is chord I in F major and it includes root, 3rd and 5th. Therefore, in constructing a triad, one must first know the key in which the music is written. Take this other example: construct the triad of the following in the following keys on the treble staff with the key signature.

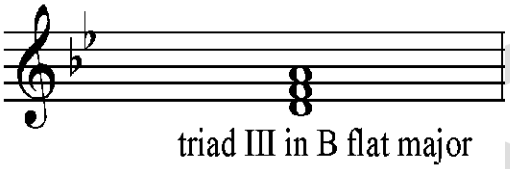
(1) Chord one in G major
(2) Chord 3 in B ♭ major
(3) Chord 4 in E major
(4) Chord 5th in D major
(5) Chord one in A major.

Answer

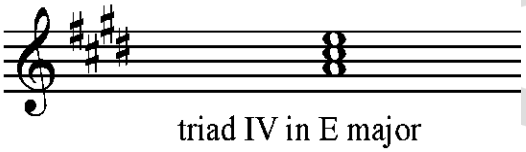
(1) In order to construct this triad, you must first understand the key of the music. The question says G major so the root of the chord starts from G. so the triad starts from G, then moves to 3 which will be 3 lines in then move to 5th which will be D then the triad will be complete.



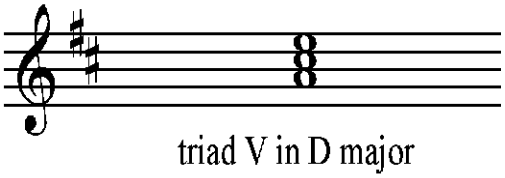
(2) With this triad, the question says that the key should be B ♭ major. The key of B♭ major has 2 flats and the question is asking about the 3rd chord. In the key of B, ♭ the tonic starts from B ♭ so the major 3rd of B ♭ will be D. Accordigly, in this triad, the tonic will start from D and continues by building in 3rds to the 5th.



(3) In this triad, the question says the key signature of this triad should be E major. The key of E major has 4 sharps, so the root of this triad starts with E and from E if you count 4, the 4th will be on A. Therefore, from A, you build up the triads

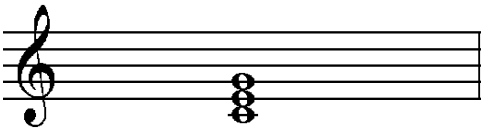


(4) For this question, the key is D major. In this key signature, there are 2 sharps and the question says 5th (so) chord. In this key, the root (do) is D and the question is asking for the 5th (so) from D, the 5th (so) will be A. From A, you build the triads in 3rds (s, t, r) which will complete the triad.



Inversion Of Triads

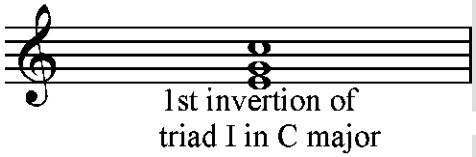
Inversion of triads means the different ways a triad can be rearranged. It must be said that the root position of a triad is when the root of the chord/triad is at the base of the triad. E.g. Root position of the chord.



With this triad, the root which is C is at the base of the triad. A triad can be in 3 positions. These are root position, first inversion and second inversion.

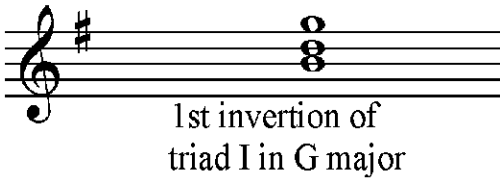
First Inversion

The first inversion of a triad is when the root of the triad is taken up by an octave. This means that the root of the music will turn out to be the third.



The original root position of the triad has c (do) as the root, but with the inversion, the root which is C (do) has been taken to an octave higher. So now 3rd (mi) has become the root. This means that, with the 1st inversion, the 3rd (mi) is the root and the original root which is C (do) is take an octave high. Another example.

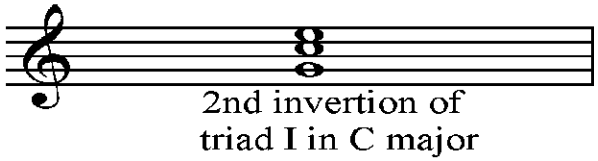
This is the 1st inversion of chord one in F major. The key of the music is F, so the root of the triad should have been an "F" but from the triad above, the "F" is rather the leading note. Consequently, the 3rd (M) is now the root of the triad and this makes it an inverted triad. So the example above is the first inversion of chord I in F major eg.



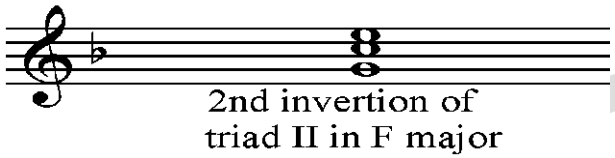
From the above example, the key is G major and the chord has been inverted in its 1st inversion position.

Second Inversion

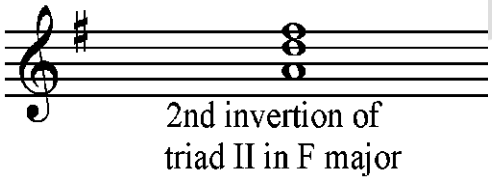
With this type of inversion, the 5th becomes the root. This means that are the same members but the arrangement changes.



From the above example, the key signature of the music is "C" major and the members are G (so), C(do), and E (m). This means that the triad has been turned upside down. This also means that in the second inversion, the 5th (so) becomes the root of the triad.



In the example above, the music is in F major and the members are G (re), C (so) and E(t). This means that the triad has been invented. So in other to get the triad which has been invented, the roles must be rearranged. After re-arrangement, it will be seen that the triad is 2nd inversion of the 5th triad.

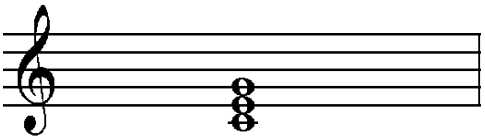


From the example above, the key of the music is "G" major. The members of the triad are A(re), D(s), and F (t) which automatically puts the music 2nd inversion of chord V.

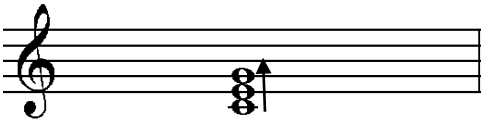
Summary of Triads in Tonic Solfa

NAME	MEMBERS	1ST INVERSION	2ND INVERSION
I	**d, m, s**	**m, s, d**	**s, d, m**
II	**r, s, t**	**s, t, r**	**r, t, s**
III	**m, s, t**	**s, t, m**	**t, m, s**
IV	**f, l, d**	**l, d, f**	**d, f, l**
V	**s, t, r**	**t, r, s**	**r, s, t**
VI	**l, d, m**	**d, m, l**	**m, l ,d**
VII	**t, r, f**	**r, f, t**	**f, t, r**

Before one can use the tonic system very well, one must understand how the tonic system works. It must also always be remembered that in music it works from the bottom to the top e.g.



On the staff notation system, the upper one goes on the staff, the higher the pitch. In other words, when plotting the triads start from the bottom to the top e.g.



In the above example, the key of the music is C major and the tonic of the music is C major. In the above example, it is read as do, mi, so. This means that read from the bottom, then up, and always remember that whatever key one is given, the name of the key is the tonic (do) of the music. For example, if one is given the key of "G" major then the tonic (do) of the music is G.

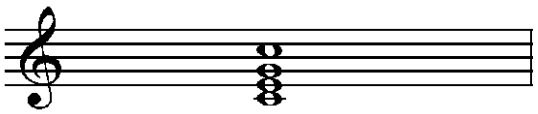
Doubling of Notes in Triads

All along, we have been dealing with triads and we said that they are made up of 3 notes. However, in writing for tonal harmony or SATB (soprano, alto, tenor, bass) we need 4 notes because the voices are usually 4. In other to get these 4 notes, some of the members of the note must be doubled.

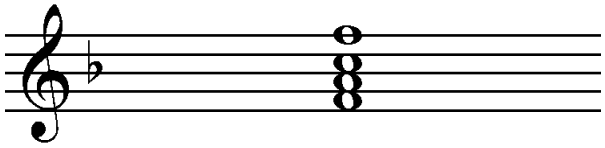
- Note: Therefore two (2) types of triads, major and minor.
- In SATB, the treble staff usually has the soprano and alto and the bass staff usually have the tenor and bass voices. In order to double triads, one must know the family of the triad, whether major or minor.
- In a major triad, it is always suitable to double the root of the triad.
- A minor triad is also suitable to double the 3rd.

d	**f**	**s**	**f**	**s**	**d** → **doubling**
s	**l**	**t**	**d**	**r**	**m** → **5th**
m	**f**	**s**	**l**	**t**	**d** → **3rd**
d	**r**	**m**	**f**	**s**	**l** → **root**

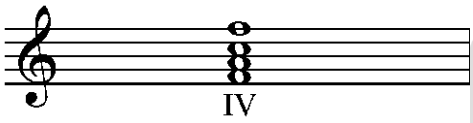
- **It must be said that in reading the above notes, one must read from the root.**

E.g 

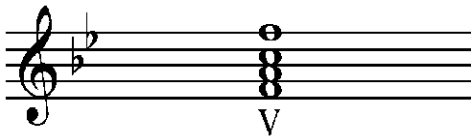
From the above example, the triad is the I root position. As has already been said, in order to double, one must first look at the family of the triad. The family of the above triad is a major and we said that in a major triad, the most suitable not to double is the root. As seen in the above example, the root is C (do). This means that the "do" or "C" will be doubled hence the above notation e.g.



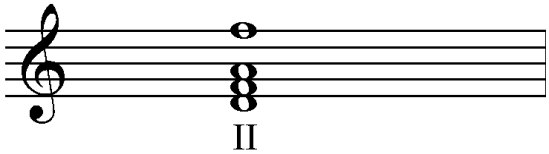
In the above example, the key signature is "F" major. This triad is triad I at the root position; the root is "F" (do) which falls under the major triad which means that the most suitable note to double is the root.



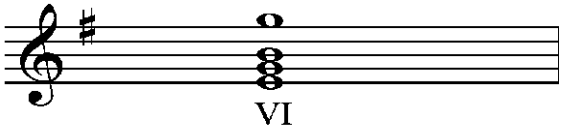
In the above example, the key signature is C major. The root of the chord is "F" (fa). This makes the chord automatically fall under the major triad, and in the major triad, the best note to double is the root hence, the above example.



In the above example, the key signature is B ♭ major. The root of the music is "F" and the members are "F, A , C, F" which automatically puts the chord in the 5 root position. As already been said, chord 5 falls under the major triad and in the major triad, the best note to double is the root, hence the above plot.



From the above example, the music is in C major and the triad is based on the super tonic of the scale and the members are D,F,A,D (r,f,l,f) and as has already been discussed, in a minor triad, it is best to double the 3rd hence the above plot.



In the above example, the music is in G major. The triad is built based on sub median (la) and it falls under a minor triad and as has already been pointed out, in a minor triad, the best note to double is the 3rd hence the above triad.

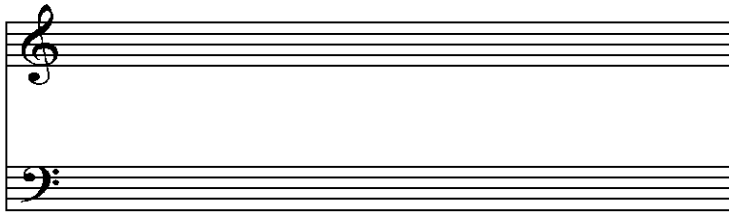
In summary, in the major triad, double the root, and in the minor triad, double the 3rd.

UNIT 7

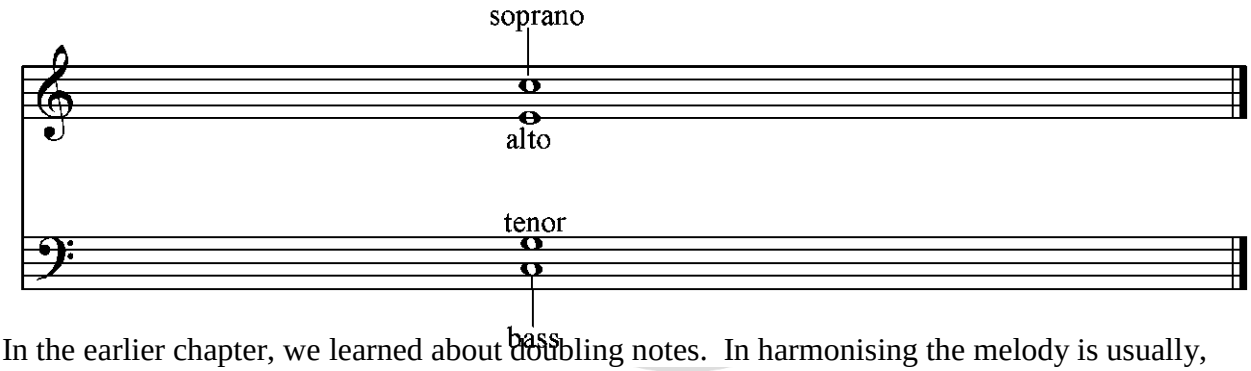
Writing on the Grand Staff

The grand staff means writing on both the treble and the bass staff.

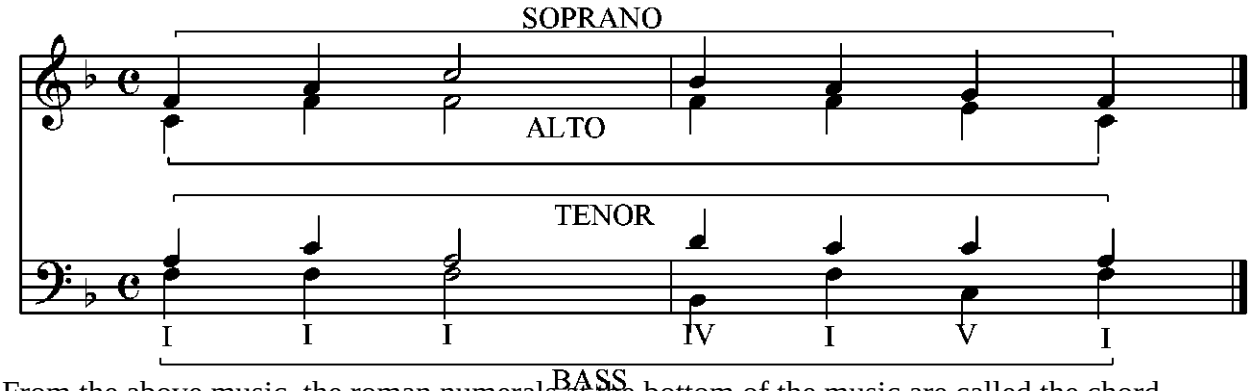
Grand Staff



In writing on the grand staff, for SATB (soprano, alto, tenor, bass) the treble staff usually takes soprano and alto whiles the bass staff also has the tenor and bass.



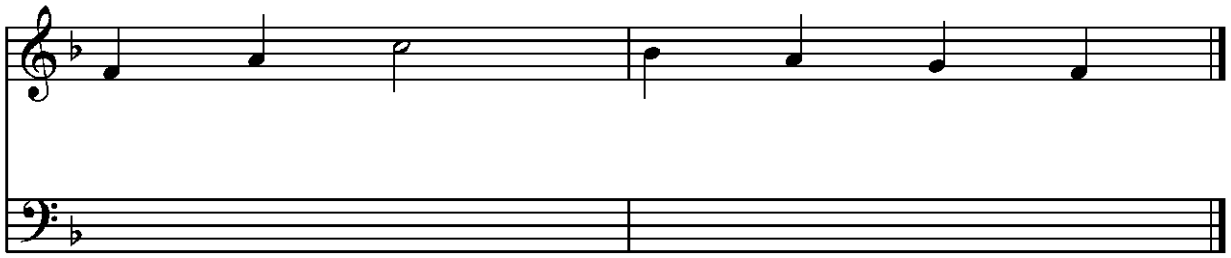
In the earlier chapter, we learned about doubling notes. In harmonising the melody is usually, the most important, when the melody is established, then it will be more simple and easier to harmonise e.g.



From the above music, the roman numerals at the bottom of the music are called the chord scheme. The chord scheme guides you on what chord to use to harmonise the given melody.

Explanation of the Above Harmony

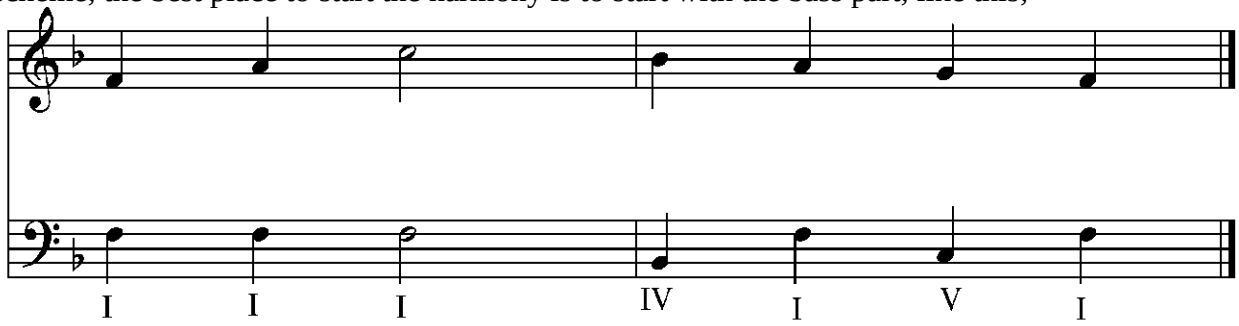
First, the melody was given as



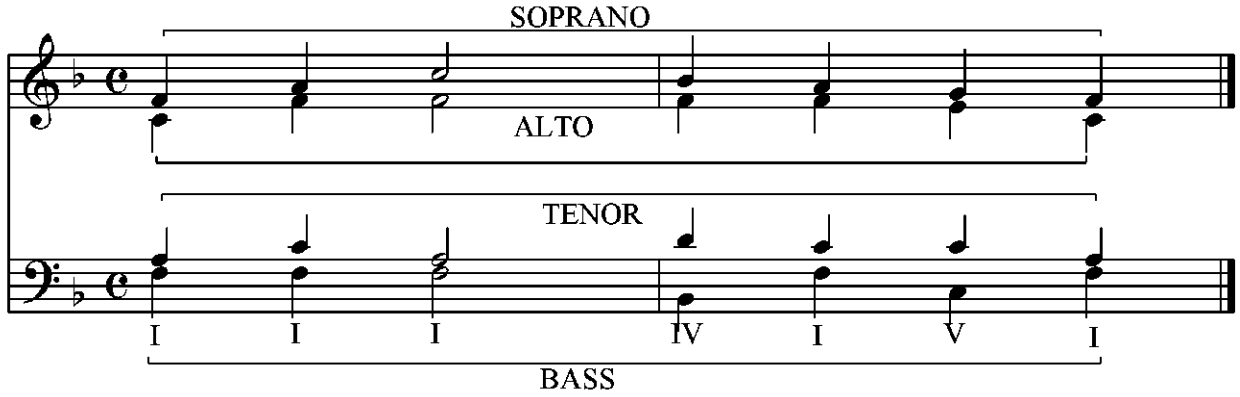
When a melody is given, you look at the melody note by note because we are harmonising note by note. In the above melody, the music is F major and the first note is one "F" (do) any chord that has "do" or "F "as a member in F major can be used. However, because it is the first note of the music. It is better to use chord "I" at the root position of the key major to establish yourself in the music so for the 1st note, I will use chord one, root position to harmonise.

- The second note is on "A" (me) which still falls within chord "I " (so), I will use the chord on root position to harmonise the second note.
- The third note is on "C" which still puts it in the range of chord one so I will still use chord I to harmonise the 3rd note.
- The 4th note is on B. The key signature is affecting B so which means that B is flattened hence B and in the scale of F major B is the 4th on the scale (fa) so I will use the Fourth chord to harmonise.
- The 5th note is also on "A" which is the 3rd level of the "F" major which means is still in chord one so I will use chord one to harmonise.
- The next note is on G (re) which is the 2nd level of the scale. In the above example, I will use the chord "v" to harmonise.
- The last note is on "F" which is the 1st note of the "F" major scale. In this music, I will use chord one root position to harmonise because is the last note of the music so I have to establish myself in the key of the music. After this, you write the chords scheme on the music like

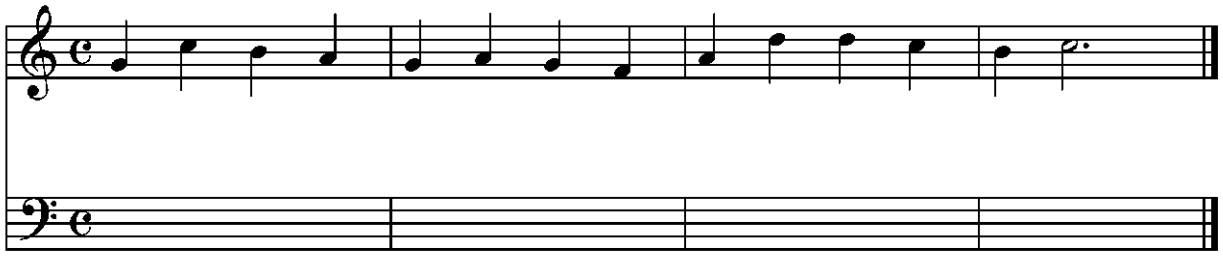
The chord scheme also shows us the position of the chord you are using. After writing the chord scheme, the best place to start the harmony is to start with the bass part, like this;



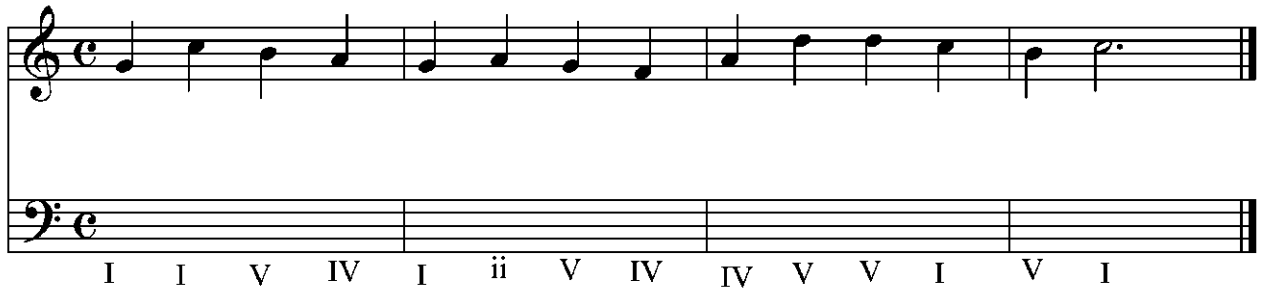
After putting the bass notes using the chords scheme, it will be left with two members of the chord. The other two members that are left in the chord will be given to the alto and tenor. So after putting in every note, I had the following harmony.



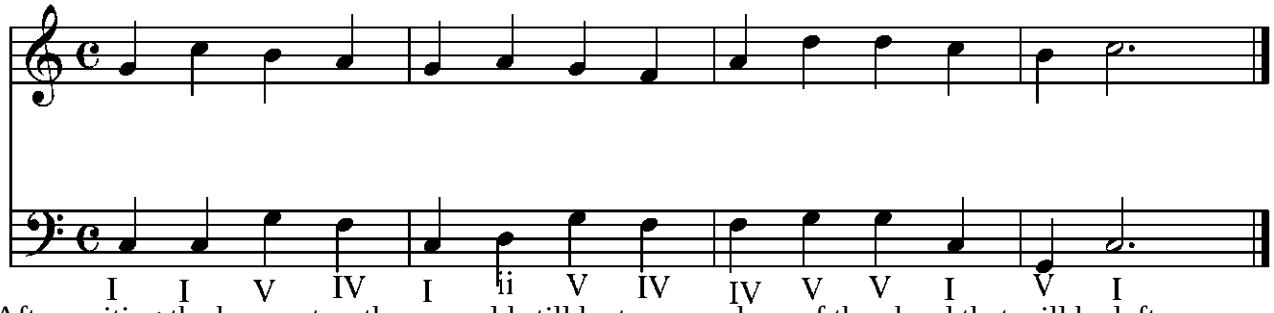
It must be said that, in writing for tonal harmony, the harmony must be singable. As much as possible, sing through the music and see if the music is singable.
E.g. harmonise the following music for SATB.



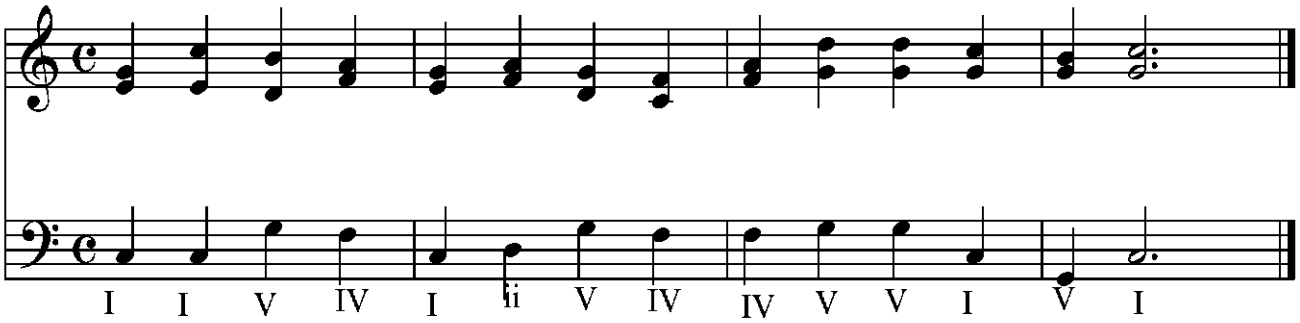
Ans.: The above example, is only the melody that has been given so we going to add 2nd, 3rd, and 4th voices. When a melody is given like the above, the first thing you must do is to decide on the chords you are going to use to harmonise the music. These chords are what we refer to as the chords scheme.



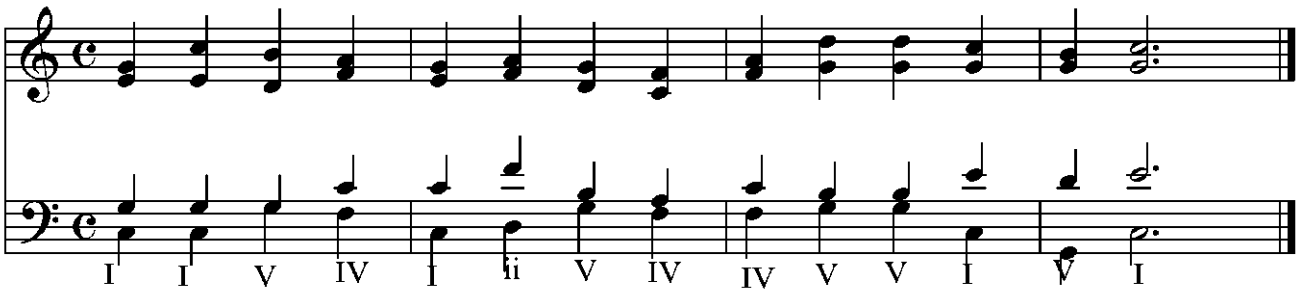
As has already been said, the chords scheme suggests the chords that are expected to be used during harmonising. Having noted it earlier, it is better to start your harmony from the bass.



After writing the bass notes, there would still be two members of the chord that will be left. Remember that a chord always has 4 members, accordingly, if the first two members have been used already, it will be left with 2 members of the chord. These two members will become the tenor and the alto parts. It is always advisable to start from the alto part like the harmony below.



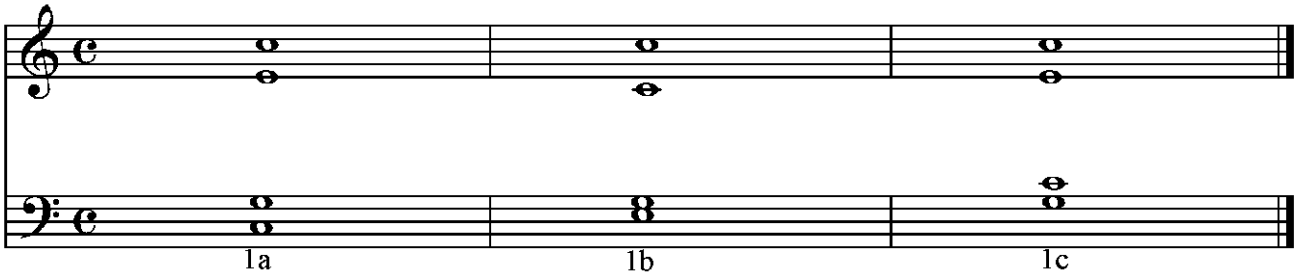
After adding the alto part, the tenor part will be left. At this point, you have already used three members of each chord, so all that is left will be one member of the chord. This last member of the chord will automatically become the tenor part.



After adding your Tenor part, the music will be complete.

Using Inversions in Harmony

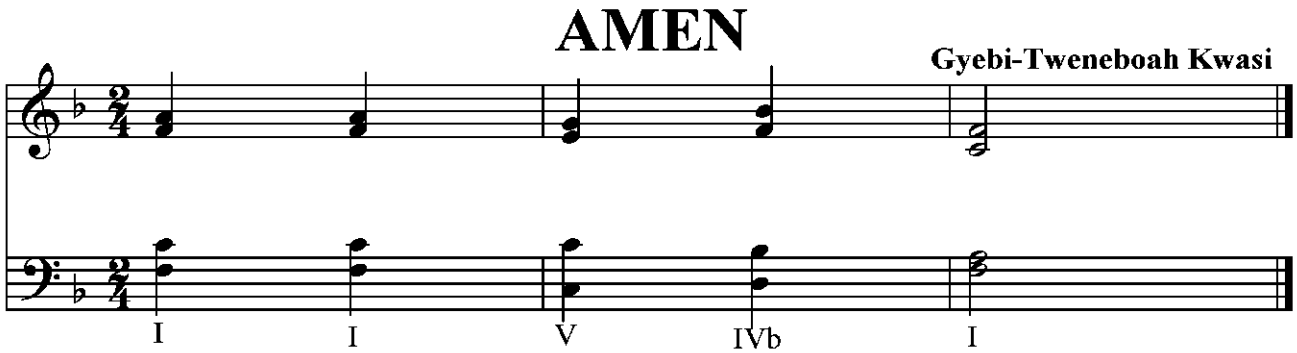
As already discussed, inversions are the various ways through which a triad can exist.
A chord that has 3 members and can also exist in 3 forms. These are root position, 1st inversion, and 2nd inversion. To write an inversion for SATB, the bass note is used to determine the type of inversion that is written. Remember in inversions, we do not bring any "foreign" notes but is the old notes that we going to rearrange.



(I have used the alphabets to differentiate the triads)
From the above example, the first chord is chord 1 root position. This is so because the root of the triad is in the bass and the other members are distributed to the other parts.

ii. Ib – chord Ib is the 1st inversion of the triad. Remember that we said in our earlier chapter that in the first inversion, the 3rd of the triad becomes the root of the triad. In the above triad, the 3rd of the chord is in the bass. This makes it the 1st inversion of the triad.

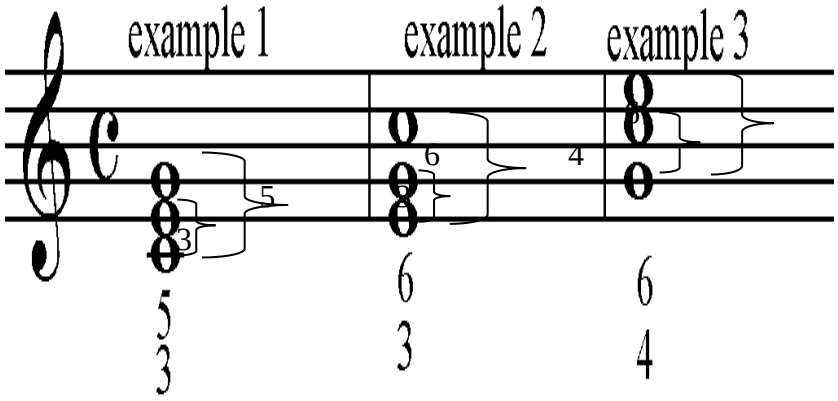
iv. 1c – this chord is the second inversion of the chord. Remember that we said in the 2nd inversion, the 5th of the triad is in the bass. In the above triad, the 5th is in the bass making it the second inversion of the triad.



From the above music, I have used inversions on the piece but it is still a chord (iv, v). Remember that the music is in F major. The music starts with a chord I root position. It is at the root position because the root of the chord (do) is in the bass of the music. More exercises and examples can be found in the music practice book

Figured Bass

This system of identifying triads is done with the help of figures. For example. $\frac{6}{4}$ Remember that this is not a time signature. Whiles time signatures are written just after the time signature, figured bases are written under chords or triads.



From the above example, the music is written in "C" major. The triad is I root position. From "C" to "E" is 3 steps, and from "C" to "G" is 5. In the above example the figured base will be 5/3 remember that this is not a time signature, so figured base or root position of a triad is 5/3. The 1st inversion of a triad in a figured base will be 6/3. This means that the figured base for the 1st inversion of a triad is 6/3.

From the above example, the figured base will be 6/4. This means that the figure base of the second inversion is 6/4. In order to write a triad in the figured base form, the name of the triad is written then the figured base will continue. E.g. I 6/4, II6/3, III5/3 for more example, refers to the workbook.

UNIT 8

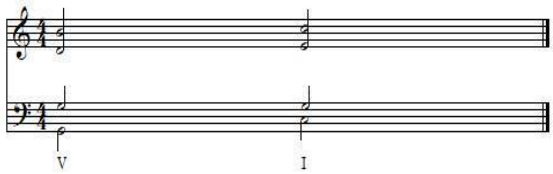
Cadennces

A cadence is a two chord progression that occurs at the end of a phrase.[3] There are abasically 4 type of cadences. These are;

- Perfect (Authentic)
- Plagal (Amen)
- Imperfect (half)
- Interrupted (Deceptive)

Perfect cadence

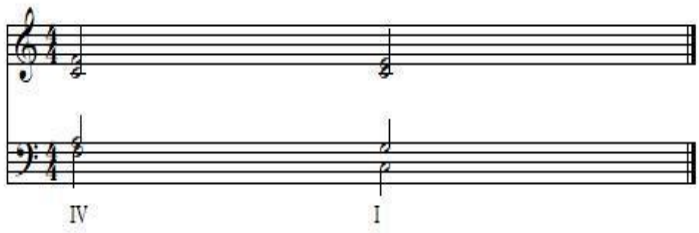
A perfect cadence also known as authentic cadence moves from chord five to one (V-1). This progression sounds as the most finished in chordal progressions.



An example of a perfect cadence

Plagal or Amen cadence

A plagal Cadence has a progression of four to one (IV-I). It is sometimes referred to as Amen Cadence because the words Amen are set to this cadence in most traditional hymns.

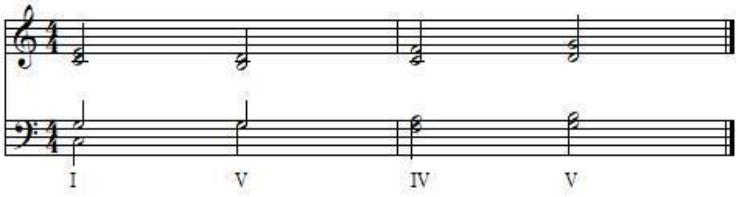


An example of perfect cadence

[3] Dan Farrant, "Types of Cadences in Music; Perfect, Plagal, Imperfect and Interrupted," *Hello Music Theory* (2002). https://hellomusictheory.com/learn/cadences

Imperfect cadence

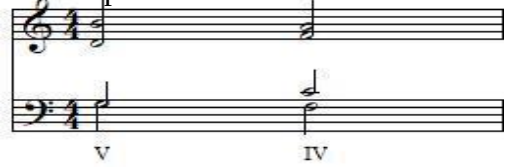
Is any cadence that ends on the dominant chord that is chord five (V). This cadence is sometimes called half cadence. Because of its special nature, it is sometimes referred to as comma in music. There can be variations such as tonic to the dominant (I-V), Super tonic to dominant (II-V) or sub dominant to dominant (IV-V).



Examples of imperfect cadence

Interrupted Cadence

This cadence is sometimes referred to as deceptive cadence. An interrupted cadence is when the dominant chord (V) id followed by a sub dominant Chord (IV). Because it is expected that the dominant chord (V) would resolve unto to tonic chord (I) it can sound unfinished and it is not often expected hence sometimes referred to as deceptive cadence.



An example of interrupted cadence.

CONCLUSION

So far, we have dealt with the basics of music theory. The topics that are covered in this book are for beginners. It is expected of students not to relent but continue their studies to more advanced studies in music theory.

REFERENCES

Benward, Bruce and Marilyn Saker, *Music in Theory and Practice* (NY: McGraw-Hill, 2003).

Farrant Dan, "Types of Cadences in Music; Perfect, Plagal, Imperfect and Interrupted," *Hello Music Theory* (2002). https://hellomusictheory.com/learn/cadences

Helfer, Scarlett and Stephanie Przybylek, "What is Music Theory?" (2022). https://study.com/learn/lesson/music-theory-overview-concepts-history.html

ABOUT AUTHOR

Kwasi, Gyebi-Tweneboah is a native of Bonwire, Ashanti Region, Ghana. He had his early introduction to music through his father, Maxwell Tweneboah Kodua who was an organist and a guitarist at an early age. In primary school at St. Georges International School, Kumasi, he had the opportunity to learn how to play the piano from Kwame Asare Bediako (John K.). In the same school, he was also introduced to trumpet play. Due to his love for music, he joined New Creation, a contemporary gospel band group as a lead guitarist. It was at this stage that his musical talent blossomed. He had his secondary school education at Kumasi Academy. There, he was the choirmaster and organist of the school. He was also the president of Gospel Waves which was a contemporary gospel group in the Scripture Union.

After secondary school, he had the opportunity to attend the University of Education, Winneba where he studied for his Bachelor of Education, Music. His major instrument when he was studying at Winneba was the piano. During and after school he worked with a lot of institutions that taught beginners how to play the piano. He has also worked with Manieson Christian Academy, The Piano Lab, and J.B. Music Academy in South Africa. In all these institutions, he was a piano Instructor.

He is currently a freelance piano instructor and a sound engineer.