

The Major Scale:

The Major Scale is constructed with the following pattern of whole steps and half steps; Whole, Whole, Half, Whole, Whole, Whole, Half.

Gtr I	Whole Step	Whole Step	Half Step	Whole Step	Whole Step	Whole Step	Half Step
I							
A	0	2	3	0	2	0	1
B	3						

This pattern gives the Major Scale its sonic character.

The C Major Scale has all of the natural notes, no accidentals.

Let us construct a Major Scale from the Fourth Degree of the C Major Scale.

The fourth degree is F so F will be our now Tonic or Root.

Applying the above pattern to F yields F, G, A, Bb, C, D, E, F.

Gtr I	Whole Step	Whole Step	Half Step	Whole Step	Whole Step	Whole Step	Half Step
I							
A	0	2	3	1	3	0	1
B	3						

Notice how we had to lower or Flat the B to Bb to make this fit the interval pattern.

Since the B is the seventh degree of C Major we lowered the Seventh and started on the Fourth.

Since Bb is the fourth degree of F Major, let us use this mathematical shortcut and apply it to F Major to create the Bb Major Scale.

The seventh degree is E, so we lower E to Eb and start on Bb. This results in Bb, C, D, Eb, F, G, A, Bb.

Gtr I	Whole Step	Whole Step	Half Step	Whole Step	Whole Step	Whole Step	Half Step
I							
A		0	1	3	0	2	3
B	1	3					

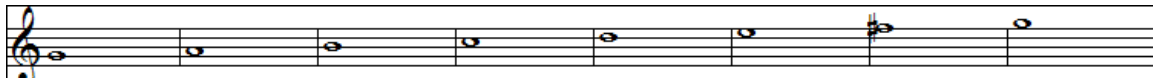
Notice how each time we go up a Perfect 4th we add a Flat.

Since the rules for proper naming of notes in a major scale state that each note name must be used exactly once and no note can have more than one accidental, it stands to reason that we could continue this process seven times until all seven notes have been lowered. The Chromatic scale contains twelve unique notes so the above method has given us eight of them.

Now let us look at the process of going from F Major to C Major.

Notice how the fourth degree of F Major must be raised to B to make the intervals fit.

So when going up a Perfect 5th we raise (Sharp) the fourth degree and start on the fifth. When we apply this to C Major to construct the G Major Scale, we get; G, A, B, C, D, E, F#, G.

							
Gtr1	Whole Step	Whole Step	Half Step	Whole Step	Whole Step	Whole Step	Half Step
T		2	4	5	3	5	7
A	5						
B							

So, once again, it stands to reason that we can repeat this process seven times to create all of the scales up to seven sharps.

Now this leaves us with a dilemma in that we now have fifteen different Major Scales each with an unique arrangement of accidentals. Since there are only twelve unique starting notes, some of these must sound the same but be spelled differently, this is called enharmonic.

The scales with increasing flats are: F, Bb, Eb, Ab, Db, Gb, Cb.
 The scales with increasing sharps are: G, D, A, E, B, F#, C#.

Since Db is enharmonic with C#, Gb is enharmonic with F# and B is enharmonic with Cb, we can reconcile that while there are fifteen unique spellings for Major scales, there are only 12 unique sounding ones.

The key signatures use this to indicate the key by how many sharps or flats are in the particular key.