

A major scale has a specific arrangement of pitches. We can use our knowledge of whole and half steps to derive a major scale formula.

Root	2nd	3rd	4th	5th	6th	7th	Root
C	D	E	F	G	A	B	C
	whole step	whole step	half step	whole step	whole step	whole step	half step
	0	2	3	0	2	0	1
3							

Thus, the formula for a major scale starting from its root is:

whole step - whole step - half step - whole step - whole step - whole step - half step

which can be summarized as two successive whole steps, one half step, three successive whole steps, and one half step (2W, 1H, 3W, 1H where W=whole step, H=half step).

Note that half steps occur between the 3rd and 4th scale degrees and also between the 7th and the Root.

The notes of a major scale can therefore be derived by starting with the scales root and applying the above formula to figure the rest of the tones. It is important to note that all major scales proceed in a consecutive alphabetical manner. In other words, the next note of the scale must use the next letter of the alphabet. The choice of using a sharp or a flat to name a tone will depend on what letter of the alphabet is next.

The following is an example of a G Major Scale and an F Major Scale:

G	A	B	C	D	E	F#	G
0	2	0	1	3	0	2	3
0							

F	G	A	Bb	C	D	E	F
3	0	2	3	1	3	0	1
3							