

Numbering Chords

It should be apparent that the order of chord qualities in each key is the same; only the names of the roots are different. Since all major scales are built in the same way, the same order of chord qualities will apply in every key. This allows us to derive a formula for chord qualities, eliminating the need to build harmonized scales one at a time.

As we have already used numbers to describe the position of single notes in a scale or chord, it is necessary to have a different type of numbering system when referring to complete chords. Scale degrees are identified by Arabic numbers (1, 2, 3...). Chords, however, are identified by *Roman numerals*, (I, II, III...). For example, the note E is the third degree (or simply "3rd") of the C major scale or a C major triad, while the E minor triad is called the "III chord" (pronounced "three chord") of the C major harmonized scale. Applying this system of chord numbering to the harmonized major scale yields the following formula:

Fig. 1: formula for the harmonized major scale

I II^{mi} III^{mi} IV V VI^{mi} VII[°]

NOTE: One system of chord numbering uses upper- and lower-case Roman numerals to indicate chords and their qualities (e.g., I, ii, iii, IV, etc.). Another system uses all upper-case numerals followed by the chord quality, such as I, II^{mi}, III^{mi}, IV, etc. There is no single system used by all musicians or music scholars. For the sake of clarity and consistency, we will use the latter system.

EXERCISE 2

Using the above formula, write the name of each triad in the harmonized scale of each key.

The Harmonized Major Scales

↓ Keys ↓	I	II ^{mi}	III ^{mi}	IV	V	VI ^{mi}	VII [°]
C major	C	D ^{mi}	E ^{mi}	F	G	A ^{mi}	B [°]
F major							
G major							
B [♭] major							
D major							
E [♭] major							
A major							
A [♭] major							
E major							
D [♭] major							
B major							