

Lesson 14: Intervals

Basic Music Theory for Guitar

What you will learn: the names of the distances between notes, and how they become the formulas for scales and chords.

What is an interval?

An **interval** is the **distance between two notes**. In Lesson 3, you learned the smallest ones: the half step (1 fret) and the whole step (2 frets). Now you will learn the names of **all** the distances, from 0 to 12 frets.

Every interval has 2 parts in its name:

- **A number** (2nd, 3rd, 5th...): count the letter names. From C to E: C(1) D(2) E(3) = a **3rd**.
- **A quality** (major, minor, perfect): this tells the exact size in frets. C to E is 4 frets = a **major 3rd**.

All the intervals in one octave

On guitar, just **count the frets** from the first note (the **root**). The **Formula** column is the number used in the scale and chord formulas on this site:

Frets	Name	Short	Formula	From C	Sound
0	Unison	P1	1	C	the same note
1	Minor 2nd	m2	b2	Db	tense, sharp
2	Major 2nd	M2	2	D	a step
3	Minor 3rd	m3	b3	Eb	sad (minor)
4	Major 3rd	M3	3	E	happy (major)
5	Perfect 4th	P4	4	F	open, strong
6	Tritone	TT	b5 / #4	Gb / F#	very tense
7	Perfect 5th	P5	5	G	strong, powerful
8	Minor 6th	m6	b6	Ab	dark, sweet
9	Major 6th	M6	6	A	warm, bright
10	Minor 7th	m7	b7	Bb	bluesy
11	Major 7th	M7	7	B	dreamy, wants to go up
12	Octave	P8	8	C	the same note, higher

Easy to remember: 2nds, 3rds, 6ths and 7ths are **major** or **minor**. 4ths, 5ths and octaves are **perfect**. A **b** (flat) in the formula means one fret lower than the major interval.

Formulas: intervals from the root

Now you can read any formula! Each number is an interval from the root. For example, the **major scale** is all major and perfect intervals:

1 2 3 4 5 6 7

And the **natural minor** scale (Lesson 9) lowers the 3rd, 6th and 7th:

1 2 b3 4 5 b6 b7

Bigger than an octave: 9, 11 and 13

In chord names like **C9**, **C11** or **C13**, the numbers go past the octave. They are the same notes as 2, 4 and 6, but one octave higher:

Formula	Same note as	Frets above root	Example from C
9	2 (one octave higher)	14	D
b9	b2 (one octave higher)	13	Db
#9	b3 / #2 (one octave higher)	15	D#
11	4 (one octave higher)	17	F
#11	#4 (one octave higher)	18	F#
13	6 (one octave higher)	21	A

You saw these in the chord book pages: **7(-9)** means a b9, and **aug 11** means a #11.

Practice

1. On string 5, put your finger on C (fret 3). Play C, then each fret up to fret 15, and say the interval name: minor 2nd, major 2nd, minor 3rd...
2. On string 5, play C (fret 3), then E (fret 7). Then play C again, then Eb (fret 6). Hear the major 3rd (happy) and the minor 3rd (sad).
3. Play C (string 5, fret 3) and G (string 4, fret 5) together. That is a perfect 5th: the power chord!
4. Use the **Notes** → **Intervals** idea: what formula is C E G? (1 3 5) And A C E? (1 b3 5)

Next lesson: Triads