



Groove, Swing, Triplets, and Polyrhythm

<https://musicreason.com/resources/groove-swing-triplets-and-polyrhythm/> · Last updated 2026-09-06

Rhythmic feel comes from the relationship between a steady grid and where notes actually land relative to it, not from a single number. A ratio, a grid diagram, or a millisecond offset can model that relationship usefully, but none of them is a complete description of how a groove actually feels.

A swing ratio is a reference point, not a genre rule

A 2:1 swing ratio means the first eighth note in a beat lasts twice as long as the second. [Swing Ratio Explorer](#) uses 2:1 as a clear reference, while real performed swing ranges anywhere from a light shuffle much closer to even eighths to a heavier, more triplet-based feel, depending on style and tempo.

A polyrhythm shares a downbeat, then disagrees on everything else

A 3:2 polyrhythm layers three evenly spaced pulses against two evenly spaced pulses over the same span of time. Both patterns start together, but every pulse after that lands in a different place, which is what makes the combined pattern's full cycle three-against-two beats long before it repeats. [Polyrhythm Trainer](#) makes both layers audible and visible at once, at a tempo you control.

A triplet's ratio is fixed; its duration is not

A triplet eighth note is always exactly $\frac{2}{3}$ the duration of a plain eighth note, at any tempo. What changes with tempo is only the underlying quarter-note duration everything else scales from. [Triplet Calculator](#) applies this fixed ratio to your chosen tempo and note value.

A grid offset in milliseconds makes placement concrete

[Groove Grid Explorer](#) expresses a note's placement relative to the underlying grid as an exact millisecond offset, ahead of or behind the beat, which turns a fuzzy verbal description ("laid back," "pushing") into a specific, comparable number.

This is a modeling and practice layer, not a performance grade

[Rhythm Pattern Generator](#) and [Rhythm Ear Trainer](#) use these same ratios and grids to build practice material and score a specific exercise attempt; none of this claims to diagnose a player's timing in a real performance, only to model and drill a stated rhythmic relationship.

Frequently asked questions

Is a 2:1 swing ratio the same as "swung eighth notes" in every style?

A 2:1 ratio is one common reference point (the long note takes twice the short note's duration), but real swing ranges from a light shuffle closer to even eighths to a heavier triplet-based feel; Swing Ratio Explorer treats 2:1 as a stated reference, not a universal genre rule.

What makes 3:2 a genuine polyrhythm rather than just a fast subdivision?

A 3:2 polyrhythm layers two different, evenly spaced groupings (three even pulses against two) over the same span of time, so the two patterns share a downbeat but disagree on every other pulse, unlike a straight subdivision, which nests evenly inside one grid.

Does a tuplet's timing change with tempo?

The tuplet ratio itself never changes (a triplet eighth is always $\frac{2}{3}$ the length of a plain eighth), but the actual millisecond duration scales with tempo exactly like any other note value, since both derive from the same quarter-note duration.

Where this shows up

RHYTHM AND TEMPO

Swing Ratio Explorer

RHYTHM AND TEMPO

Polyrhythm Trainer

RHYTHM AND TEMPO

Groove Grid Explorer

RHYTHM AND TEMPO

Tuplet Calculator

RHYTHM AND TEMPO

Rhythm Pattern Generator

EAR TRAINING

Rhythm Ear Trainer