

Basic Metrical Theory

Time Signatures

Time Signatures are numbers that determine the duration of a measure (a unit of musical time).

The top number represents how many beats are in a measure. This number could theoretically be anything, however, 2, 3, 4, 6, and 12 are most commonly used.

The bottom number represents what note value is the “beat.” This number will almost always be multiples of 2 or 4: 1, 2, 4, 8, 16, 32, etc. Each number corresponds to a note value. These relationships are as follows:

- 1 = whole note
- 2 = half note
- 4 = quarter note
- 8 = eighth note
- 16 = sixteenth note
- etc....

Therefore, a time signature of (4/4) means that there are four beats to a measure and each of those beats is a quarter note. Likewise, a time signature of (3/4) means three beats in a measure, which each beat being a quarter note. A time signature of (6/8) means six beats in measure, which each of those beats being an eighth note long.

In measures where the eighth note is the basic beat, we tend to divide them into groups of three. For example, a measure in (6/8) will often be broken down into two groups of three eighth notes (counted 1, 2, 3, 2, 2, 3). We then feel a (6/8) measure in two bigger beats). Similarly, measures of (9/8) or (12/8) would be felt as measures of three bigger beats or four bigger beats respectively.

When we have an unusual number at the top of time signature, such as 5 or 7, we refer to these as odd time signatures, due to their odd feel. In order to count them, we often break them down in smaller groups of two or three. For example, a (5/8) measure would be broken down into groups of two eighth notes and three eighth notes (counted 1,2, 1,2,3). Similarly, a measure of (7/8) might be broken into two groups of two eighth notes and one group of three eighth notes (counted 1,2, 1,2, 1,2,3).

Note Values

Regardless of time signatures, note values do not change, nor do their relationships to each other. This means that a half note will always have the same value as two quarter notes. A quarter note will always have the same value as four sixteenth notes, etc.

- whole note = two half notes
- half note = two quarter notes
- quarter note = two eighth notes
- eighth note = two sixteenth notes

When a dot is added to a note, the duration is increased by one half of its original value. For example, a quarter has the value of two eighth notes, each of course being half its value. A dotted quarter note then has a value of three eighth notes. We will often see dotted notes in (6/8), (9/8) and (12/8) meters, since each of these meters are broken into smaller groups of three. For example, a (6/8) measure would contain two dotted quarter notes, each having a value of three eighth notes.

Triplet and sextuplet figures are “borrowed” rhythms. As previously stated, (6/8) and likewise measures are often divided into groups of three. We will call these triple meters. Measures such as (4/4) and (2/4) are often divided into smaller groups of two and four, therefore we will call them simple measures. When a quarter note is divided into three equal parts instead of the usual two, we call this a triplet. This figure is borrowed from triple meters, which is what gives the triplet its “out of place” feel.