

— NMAG India

digiMats

**Time
Signature**

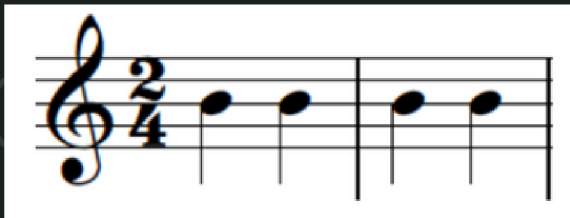
NMAG India

Reading the Time Signatures

The number of notes allowed in each measure is determined by the time signature.

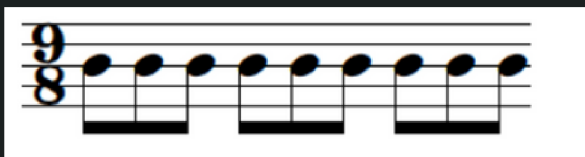
As you saw in the time signature examples above, each time signature has two numbers: a top number and a bottom number: 2/4 time, 3/4 time, 4/4 time, 3/8 time, 9/8 time, 4/2 time, 3/1 time, and so on.

The bottom number of the time signature indicates a certain kind of note and the top note reveals how many of those notes there are in each measure! If you look at the American note names from the chart above, there is a fun little trick to it.



Take the 2/4 time signature for example: with the 2 on the top of the time signature you know there are 2 beats for one measure, and this leaves you with a fraction of 1/4—a quarter, the note-length the time signature is indicating to you then is a quarter note. Therefore, you know that there are two quarter notes worth of time in every measure.

Let's try another one. In 9/8 time, you know that in every measure there are 9 notes in a 1/8 length.

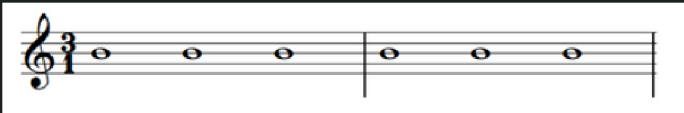




How about in 4/2 time?



In 4/2 time, each measure has 4 notes of 1/2, so we have 4 1/2 notes:



Now try 3/1 time!



In 3/1 time, so we have 3 notes of a 1/1 length aka whole notes! The 4/4 time signature is so common that it actually has two names and two forms, the first being 4/4, and the second being the , literally called “Common Time.” So whenever you see the  in music, you know that it is actually 4/4 time (which has how many notes of what kind of length?).

Another prevalent time signature is the . It looks a lot like the “Common Time” signature, except it has a slash through it. Technically, these measures have four quarter notes in them as well, but it is called “Cut Time,” hence the C being slashed or “cut.” This “Cut Time” change to “Common Time” means it goes twice as fast, so instead of the quarter note getting the beat, the half note gets the beat! The is like  2/2, just written different and used for faster tempos than 2/2.

Below is an example from the opening of Edvard Grieg’s Peer Gynt Suite “In the Hall of the Mountain King.” This excerpt is marked in Common Time with a big C, which means 4/4. If you count the notes in the measures given, you will see that there are four quarter-notes worth of time per measure.



This example is particularly relevant to our discussion of Common and Cut time, because as this piece continues, it gradually increases in speed, moving from sounding like a 4/4 to 2/2. And this is actually the case! By the end of the piece, the conductor directs the orchestra in Cut Time rather than Common Time. Listen to this performance to hear the beats get faster and see if you can hear when the orchestra switches into Cut Time!

Meter Classifications

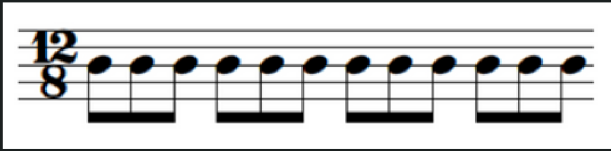
Those are the basics of reading and deciphering time signatures, and now we get to move onto learn how those time signatures can be understood as meters! There are two levels of classifying meters, the first level of classification focuses on how the beat indicated by the time signature is subdivided. There are only two ways for the beat to be regularly subdivided in Western music, and that is into two or into three smaller notes! Refer to the note value charts above. All other subdivisions are either multiples of these two subdivisions or some complex form of adding them together. For ease of notation and classifying the subdivisions as meters then, we have: Simple Time, Compound Time, and Irregular Time.

Simple Time

Simple time is any meter whose basic note division is in groups of two. Examples of these meters include the time signatures: Common Time, Cut Time, $4/4$, $3/4$, $2/4$, $2/2$, $2/1$, and so on. These meters are simple because the quarter note divides equally into two eighth notes, the half-note divides equally into two quarter notes, or the whole note divides equally into two half notes. You can see these divisions if you refer back to the above note length chart.

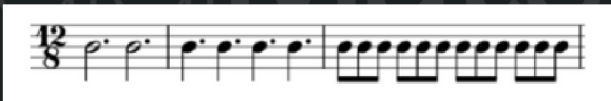
Compound Time

Slightly more complicated than is compound time, which is any meter whose basic note division is into groups of three. You automatically know you are not in simple time if there is an 8 as the bottom number of your time signature. An 8 to mark simple time would be pointless, as will be demonstrated below with beat hierarchies and accents section. So, when you see an 8 as the bottom number of your time signature, you know that your eighth notes should be grouped together in groups of three instead of two! In $6/8$, you have two groups of three eighth-notes, in $9/8$ you have three groups of three eighth notes, and $12/8$ has four groups of three eighth notes.



Technically, to get a compound time sound, composers could use a simple time signature and then mark all of the main beat subdivisions in triplets—making a duple division into a triple—throughout an entire piece to get the same effect. However, using triplets throughout to get a compound time sound would appear quite messy and cluttered on the page. An example of the 12/8 against the 4/4 using triplets is in the table below, to the listener, these examples sound exactly the same.

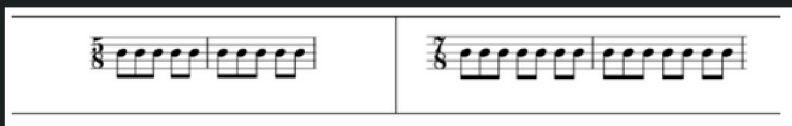
Additionally, it might be confusing for performers used to switching between Time Signatures, duples and triples, and could be confusing as to the composer's intentions with the piece.



Even though it is more common to see a simple time signature with the duple divisions in Western music of the past five or six centuries, it was actually compound time which developed and was notated first! Because Western music notation developed alongside church music, much of the underlying theory surrounding music had a theological basis. For meter, the most common subdivision was in compound or triple divisions to relate musical time being three in one, similar to the Christian Trinity of the Father, the Son, and the Holy Ghost.

Irregular Time

The final option for beat subdivision is an irregular or unequal subdivision of the beat, which covers everything else! Even though these are “irregular” meters, they do have patterns which are discernable for the performer. The most common irregular meters actually mix simple time and compound time together in a single measure. Thus, in each measure, there are beats with three subdivisions and there are beats with two subdivisions. Examples include such time signatures as 5/8 and 7/8. Because there are 5 eighth notes per measure or 7 eighth notes per measure, you cannot have equal groupings of 2 or 3 eighth notes. Therefore, similarly to 6/8, 9/8, and 12/8, how the groups of eighth-notes are beamed together to a larger count, in 5/8 and 7/8 they are beamed together to make a larger count as well, but in 5/8 and 7/8 then, because the number of eighth notes is odd (and prime), the count lengths in each measure are uneven—or irregular. The eighth note typically stays the same length, but because some counts have two and some counts have three eighth notes, they are irregular!



You can see the groupings of three eighth notes with two eighth notes in each measure of 5/8 above, and groups of two eighth notes against two groups of two eighth notes in each measure of 7/8. In 5/8 and 7/8 then, the first count of each measure is one eighth-note longer than the rest of the counts. Depending on where the placement of the longer beat, composers can create different accents and atmospheres.

Duple, Triple, and Quadruple Classifications

The second level of classification for meters is how many beats there are in a measure. There are three which are the most common: duple (2/2, 2/4, 6/8), triple (3/4, 9/8, 3/2), and quadruple (4/4, 12/8, 4/2).

A duple meter has two beats per measure, a triple meter has three beats per measure, and a quadruple meter has four beats per measure. It is rare to see any larger or smaller that are not an equivalent to one of these three.

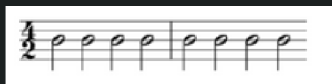
Cut-Time is duple and simple meter because there are two beats per measure and those beats are divisible by two:



3/4 time is triple and simple meter because there are three beats per measure and each beat is divisible by two:



4/2 is quadruple and simple meter because there are four beats per measure and each beat is divisible by two:



6/8 time is duple and compound meter because there are two beats per measure and each beat is divided into three:



9/8 time is triple and compound meter because there are three beats per measure and each beat is divided into three:



5/8 time is duple and irregular meter because there are two beats per measure and each beat is divided irregularly:



As you can see from the above explanations of the various time signatures and their meters, there are a lot of similarities and subtle nuances between all of these meters.

For example, all of the duple and quadruple time meters are similar in that they have two and four beats per measure. This trait makes them sound very similar to the ear. Depending on the tempo of the piece, triple and simple time pieces can sound compound and some compound pieces (i.e. 6/8) can sound like they have a simple beat subdivision but triple (i.e. the 6/8 sounding like 3/4)!

What helps to distinguish a lot of these meters is the beat hierarchies and typical styles of music that they are employed in.