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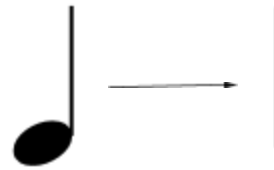
The Basics

Rhythm is the element of music that relates to *time*—how long or short each note is. The note duration or length is specified by one or more of the following components:

noteheads



stems



flags



beams



Together, the **stem**, **flag**, **beam**, and **notehead** tell the performer how long the note lasts. This is also called **note duration** or **note value**.

Stems can go up or down, but this doesn't affect how they are played. Notes are arranged from left to right, however, note spacing does not dictate note duration (short notes may have lots of space after them and long notes may have little space after them).

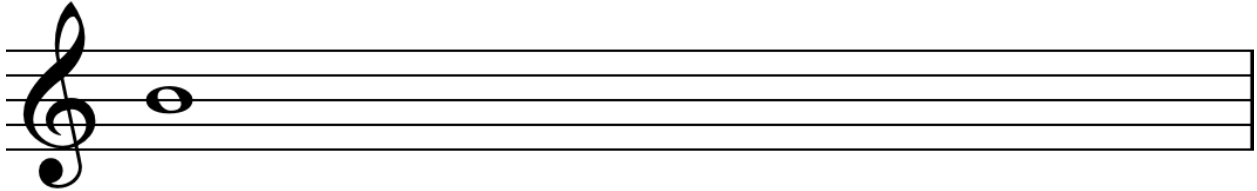
Note Values

Let's take a look at the most common note values. Each symbol is twice as long as the next shorter symbol and half the duration of the next longer symbol.

The **whole note** is a hollow circle with no stem, and is the length of 2 half notes.



Write 10 whole notes on the staff below:

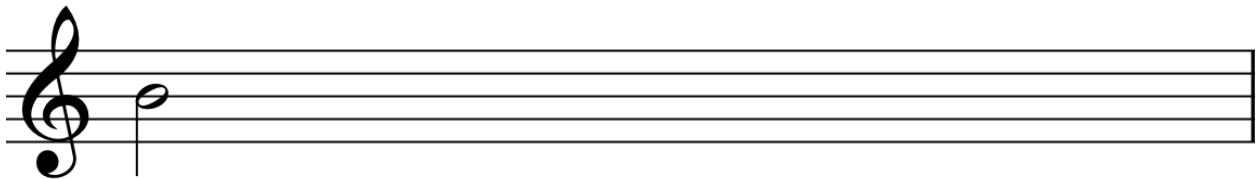


Tip: noteheads can go on spaces or lines on the staff

The **half note** ($\frac{1}{2}$ note) is a hollow circle and a stem with no flag. It is half the length of a whole note and twice the length of a quarter note.



Write 10 half notes on the staff below:



The **quarter note** ($\frac{1}{4}$ note) is a filled in circle with a stem and no flag. It is half the length of a half note and twice the length of an eighth note.



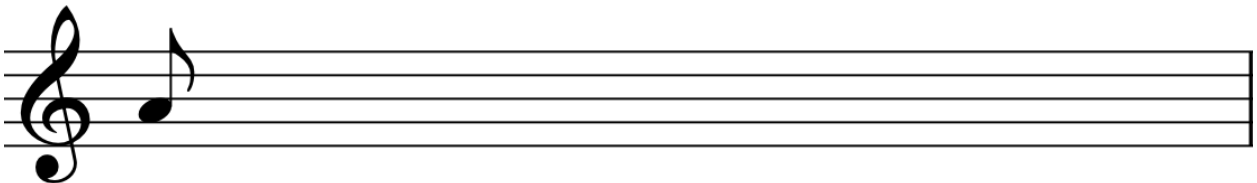
Write 10 quarter notes on the staff below:



The **eighth note** ($\frac{1}{8}$ note) is a filled in circle with a stem and one flag. It is half the length of a quarter note and twice the length of a sixteenth note.



Write 10 eighth notes on the staff below:



The **sixteenth note** ($\frac{1}{16}$ note) is a filled in circle with a stem and two flags. It is half the length of an eighth note.



Write 10 sixteenth notes on the staff below:



To make shorter notes, continue adding flags.

- 3 flags = 32nd note, which is half the length of a 16th note.
- 4 flags = 64th note, which is half the length of a 32nd note. etc...

Note values become more clear when visualized in “tree” form:













Calculate the following:

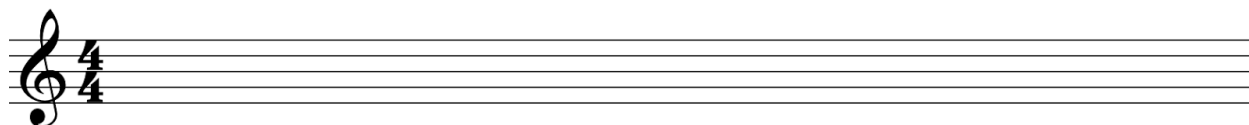
1. How many quarter notes in a whole note?
2. How many sixteenth notes in a quarter note?
3. How many eighth notes in a quarter note?
4. How many sixteenth notes in a half note?

Rests

Each of these note values has a corresponding **rest**, which instructs the performer to be silent for the same amount of time as their corresponding note values.

Note Value	Corresponding rest
	
	
	
	
	

Write 1 of each rest on the staff below:




Dots

We can make some additional note and rest durations by using **dots**. A dot following a symbol adds half the value of the preceding note, rest, or dot to itself.



Complete the equations with one valid note value:

Beat and Tempo

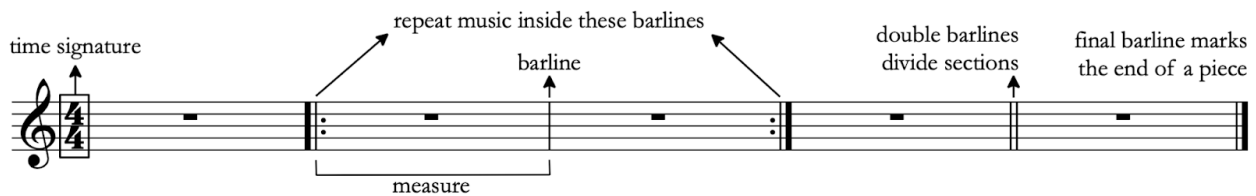
The **beat** is the regular, recurring pulse in music. The beat is, by definition, at a speed that is neither too fast nor too slow to dance or conduct to. The rate at which the beats occur is called the **tempo**, and is measured in beats per minute (a number generally between 30 and 200, also called BPM). Try moving to your favorite pieces of music and tapping the beat you feel into a metronome to get the tempo.

Beats can be divided into:

- two equal parts, also called **simple division**
- three equal parts, also called **compound division**

Measures and Time Signatures

Written music is divided into **measures**, also called **bars**, which are groupings of beats, divided by vertical bar lines. **Time signatures** are symbols at the beginning of a piece that tell you how long each measure is.















3 = how many of a given rhythm fits in one measure
4 = note value that the top number is referring to










So, in this case **three quarter notes** fit into one measure of 3/4

A few notes on time signatures:













- If the top number is 2, 3, or 4, that number is the amount of beats per measure, and the note value of the bottom number gets the beat.
- If the top number is 6, 9, or 12, that number divided by 3 is the amount of beats per measure, and a note value which is 3 times the length specified by the bottom number gets the beat.
- Time signatures with a top number of 1, 5, 7, 10, 11, 13, 14, 15, and so on get used, but very rarely, and the amount of beats per measure and the amount of divisions per beat vary.

Simple time signatures

Time signature	Beats per measure	Beat note	Division of the beat
$\frac{2}{2}$ or C	2		
$\frac{3}{2}$	3		
$\frac{4}{2}$	4		
$\frac{2}{4}$	2		
$\frac{3}{4}$	3		
$\frac{4}{4}$ or C	4		

	2		
	3		
	4		

Compound Time Signatures

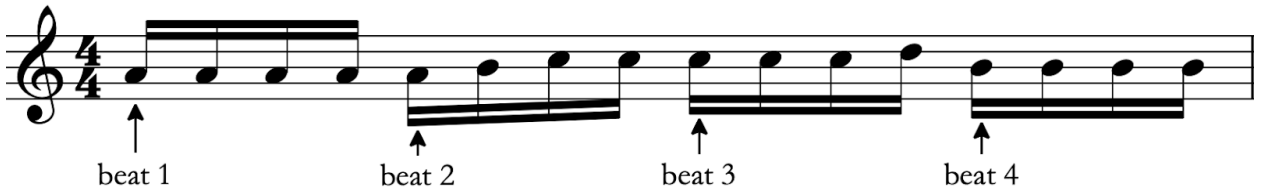
Time signature	Beats per measure	Beat note	Division of the beat
6/4	2		
9/4	3		
12/4	4		
6/8	2		
9/8	3		
12/8	4		

Beams

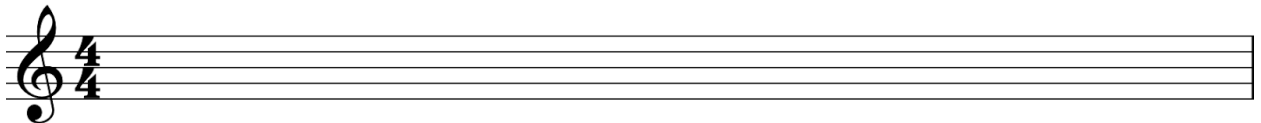
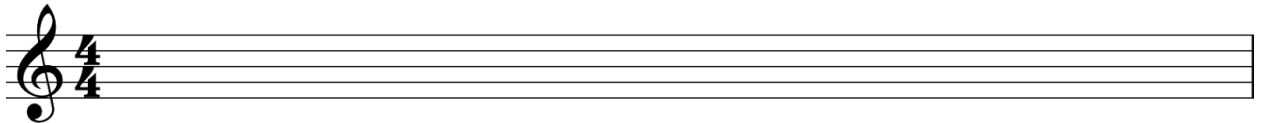
In addition to functioning like flags, **beams** are used to group notes within the same beat. Consider the passage below.



Notice how it is difficult to see where the beats are upon first glance. Below is the same passage, rebeamed for clarity. The first note in each beam group falls on a beat, making it easier to read at a glance.



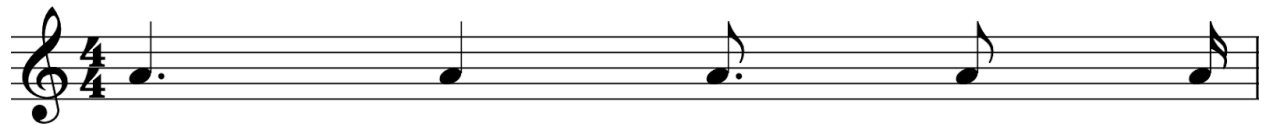
Renotate the following passages with beams to show each beat:



Ties

A **tie** is a curved line that connects two notes of the same pitch, creating a new note value that is equal to their sum. Ties have three functions: to make more note values than would otherwise be possible, to sustain notes over barlines, and to show where strong beats are within a measure for clarity.

Consider the following passage:



Becomes



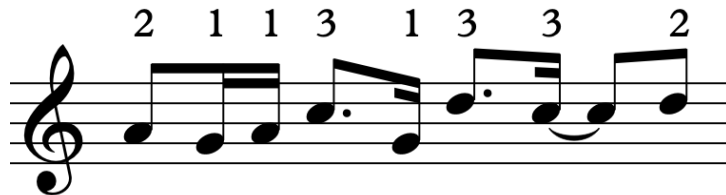
Renotate the following examples using ties and beams to show each beat:

Step by step guide on how to decode rhythms

1. Pick a passage to learn. Note that the following method won't work for passages with triplets (e.g. triplets in simple meter). More on that later. Let's examine this passage:



2. Determine the shortest note or rest value. In this case: 16th notes.
3. Determine how many of this rhythmic value could fit in each note or rest and write this number above or below each note:



4. Set a metronome to a moderate tempo (e.g. 80 BPM).
5. Count aloud up to each number in order. Say one number per click and clap each time you say "one." That might sound something like this:

Voice: *one two one one one two three one one two three one two three one two*
 Claps: *clap* *clap*clap*clap* *clap*clap* *clap* *clap*

6. Gradually increase the metronome in increments of 10 until you reach the desired tempo. Repeat the exercise 5 - 10 times on each metronome setting.
7. Once a moderately fast tempo has been achieved, counting in this manner will become difficult. At that point you can transition to this counting method:
 - a. On each beat, say the beat number
 - b. On the halfway mark of each beat, say "and"
(written as +)
 - c. On the second 16th note of each beat, say "ee"
 - d. On the fourth 16th note of each beat, say "uh"

