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Audio Examples: There are 30 recorded audio examples to accompany this book, indicated by this icon: . These examples are intended to strengthen understanding of rhythmic and technical concepts, and of practice techniques. Rhythms are demonstrated along with foot tapping and verbal counting. Only some portions of the exercises have been recorded to discourage imitation and instead encourage students to become independent rhythmic readers. Audio examples can be found here: <https://robmilfam.wixsite.com/subdivideandconquer>

Subdivide and Conquer is meant to serve two purposes: to enable players of all instruments to develop their rhythmic abilities, and to enable percussionists/drummers to learn basic playing techniques while developing their rhythmic abilities. It can be used in large group, small group, and individual private settings. It is based on the concept of using subdivision to “measure” the relative lengths of notes and rests.

Fundamental Rhythmic and Technical Development

Strategic Practicing

IMPORTANT - For almost all practicing, use the following “Strategic Practice Procedures”:

- 1) Start slowly and gradually speed up
- 2) Work on challenging sections separately
- 3) Count out loud
- 4) Tap foot

When you practice, you get better. When you practice wrong, you get better... at doing it wrong. Therefore, practice slowly enough and in small enough “chunks” to train your brain and muscle memory to execute accurately. Then gradually increase the tempo (speed of the beat) and put together the “chunks.” Focus on the challenging areas; it is okay to enjoy playing what you can already play, just don’t consider it as practicing. Tapping your foot enables you to “feel” the beat, and your counting should “line up” with your tapping. Your counting will provide you with a unit of measurement that will help you accurately place notes in relationship to your foot-tapping of the beat. (Tapping your toe instead of your heel is generally recommended.)

There are many aspects to learning to play an instrument; for now, let us focus on: motor sense, technique (for percussionists/drummers only), and basic rhythm reading.

Motor Sense

See how fast you can tap and clap to a metronome. Start at a tempo where you can do it comfortably and gradually increase until you reach your limit. For now, if you cannot maintain a tempo of at least 152 beats per minute (bpm), practice a few minutes daily, starting around your limit and gradually trying to increase the tempo. When you can do this at 152 beats per minute, try clapping halfway between the taps (when you bring your foot up). You will probably have to start slower, since most students find “upbeats” more challenging than “downbeats.” This is a very common, often underestimated skill, and should also be practiced for a few minutes daily until at least 152 beats per minute is reached.

Drum Exercise: Single-Stroke Roll

For percussionists/drummers only (others are encouraged to use appropriate supplementary material for their technical development):

It is strongly recommended that percussion/drum students receive guidance from a qualified teacher to develop proper stick grip and motion, as incorrect habits can be difficult to break.

Holding the sticks properly, practice single strokes, alternating your sticks (right, left, right, left...) and "lifting" the tone from the drum. Play them as fast as you can *relaxed* and *evenly*; if you start to get tense or play unevenly, slow down. Keep pushing on your limit, but don't remain beyond what you can do relaxed and evenly. Do this for several minutes each day; when you feel a little pain, continue, relaxed and evenly, for another minute before stopping (though don't overdo it). When fast, alternating single strokes are referred to as single-stroke rolls. A few weeks of the above procedure usually produces substantial improvement and lays an important foundation for future progress. Most students can work on developing these skills and rhythm reading simultaneously.

Rhythm Reading Fundamentals

If you have seen a piece of music before, you have probably noticed a **staff**  that it is divided by **bar lines**  into **measures** . You have probably also seen whole, half, and quarter notes and rests written in those measures.



In general (there are many exceptions in music), when reading music, the beginning of each piece has two numbers, one above the other (though it is not a fraction). This is called the **time signature** (example: ), and understanding it is key to understanding the rhythms that follow them.



- The top number tells the **number of beats in each measure**.
- The bottom number tells the **kind of note that equals 1 beat**.

Hint: Turn the bottom number into a fraction by putting a "1/" over it; this will indicate a "kind" or "type" of note. For example, if the bottom number is a 4, put a "1/" over it, making it "1/4," otherwise known as a "quarter," thus indicating that a quarter note will equal 1 beat. Usually, the indicated note is the type of note that will be foot-tapped.

If you have ever walked to the beat of a tune you had in your head, you have experienced that a beat does not have to be heard; instead, you "felt" the beat. A beat is a steady pulse. If the top number of the time signature, for example, is a "3" (as in ) , there will be 3 beats or pulses between every set of two bar lines, and the beats will be counted "1,2,3,1,2,3...."

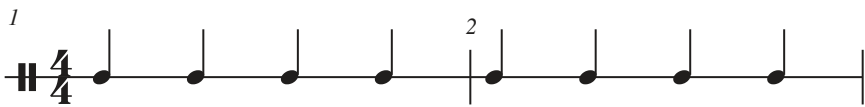
Meanwhile, we don't know yet *what kind* of notes will be counted "1,2,3,1,2,3...." It is the bottom number that gives us this very important information -- the kind of note that equals 1 beat.

If the bottom number, for example, is a “4” (as in $\frac{3}{4}$), the quarter note will equal 1 beat, so each beat number (“1,2,3”) will be equal to the length of a quarter note. If the bottom number is a “2,” the half note will get one beat, so in this case ($\frac{3}{2}$), each beat number (“1,2,3”) will be equal to the length of a half note (thus there will be the equivalent of 3 half notes in each measure).

Basic Rhythms in 4/4

The following exercises have a fairly common time signature, $\frac{4}{4}$, sometimes written as $\frac{\text{C}}{4}$, and often referred to as “common time.” The top number indicates that there are 4 beats in each measure, so you will count “1,2,3,4,1,2,3,4...” (remember to count out loud). The bottom number indicates that the quarter note (♩) will be equal to 1 beat; thus, you will tap your foot on the “1,” the “2,” the “3,” and the “4,” over and over, with each tap representing one quarter note (♩). In this case, we took the bottom number of the time signature (a “4”) and turned it into a fraction by putting a 1 over it (“ $\frac{1}{4}$ ”=quarter); thus the quarter note will equal 1 beat. A series of quarter notes with indicated counting and tapping follows.

Ex. 1:

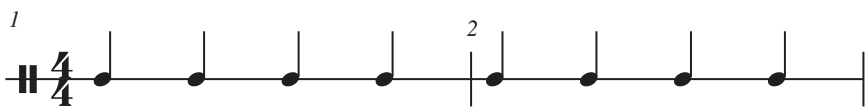
Clap: 

Count: 1 2 3 4 1 2 3 4

Tap: Tap Tap Tap Tap Tap Tap Tap Tap

Soon we will add other notes and rests to this foundation, but for now, start by clapping the quarter notes written in Ex. 1 above. Count out loud and tap your foot as indicated, while clapping each quarter note. Next, do the same for Ex. 2 below, where arrows are used to indicate foot-taps.

Ex. 2: 

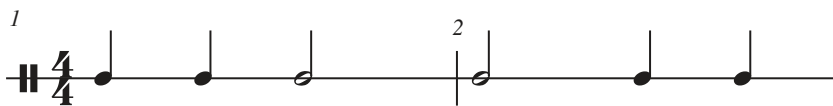
Clap: 

Count: 1 2 3 4 1 2 3 4

Tap: ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓

Once you are comfortable with this, we can substitute one half note (♩) in the space of two quarter notes, since, just like in math, two quarters fit into one half (or, as an illustration, two quarters of a pizza fit into one half of a pizza). In the first measure of Ex. 3, clap on “1,2,3” but *not* on “4,” since beat “4” is contained within the half note that begins on beat “3” and takes the space of two beats (“3” and “4”). In the second measure, clap on beat “1” but *not* on beat “2,” since beat “2” is contained within the half note that begins on beat “1” and takes the space of two beats (“1” and “2”). Then complete the measure by clapping on the quarter notes on beats “3” and “4.” Be sure you are tapping your foot on every beat (1,2,3, and 4). Clap only at the beginning of each note.

Ex. 3: 

Clap: 

Count: 1 2 3 4 1 2 3 4

Tap: ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓

Answer: Because the bottom number of the time signature is a “4” (which, as described on p. 2, represents a quarter note), and the bottom number indicates the kind of note that equals one beat. Therefore, one beat is set equal to one quarter note when the bottom number is a “4”.

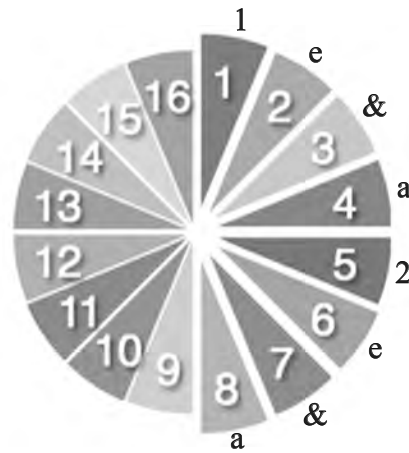
Ex. 4:

Ex. 5:

The 'Piano' exercise consists of two staves of music. The first staff begins with a treble clef, a key signature of one sharp (F#), and a 4/4 time signature. It contains 16 measures of music, with fingerings 1 through 4 indicated below the notes. The second staff continues the exercise with another 16 measures, also with fingerings 1 through 4 indicated below the notes. The notation includes quarter notes, eighth notes, and rests, with some measures containing multiple notes.



Four of the 16 numbered slices would combine to represent a $\frac{1}{4}$ (quarter) of the whole pizza, just like four sixteenth notes would represent $\frac{1}{4}$ (quarter) of a whole note. Thus, there are four sixteenth notes in a quarter note.

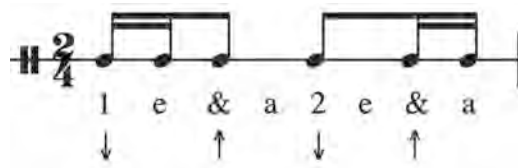


Eight of the 16 numbered slices would combine to represent a $\frac{1}{2}$ (half) of the whole pizza, just like eight sixteenth notes would represent $\frac{1}{2}$ (half) of a whole note. Thus, there are eight sixteenth notes in a half note. (Counting syllables have been added to illustrate how the half note would be counted.)

In Ex. 14, count sixteenth notes, since they are the shortest notes; they fit into themselves as well as longer notes. Since 4 sixteenth notes can fit in each beat, each beat will receive 4 sixteenth-note syllables. For example, in $2/4$, a half note taking two beats would be counted: “1e&a2e&a.” (Notice that in $2/2$, we divide half note beats into 4 eighth notes, and in $2/4$, we divide quarter note beats into 4 sixteenth notes.) Each sixteenth note will get 1 “sixteenth-note syllable,” each eighth note will get 2 “sixteenth-note syllables,” each quarter note will get 4 “sixteenth-note syllables,” each half note will get 8 “sixteenth-note syllables,” and each whole note will get 16 “sixteenth-note syllables.”

The table below Ex. 14 depicts how to work out the measure using STEP 3 of the “Rhythm Routine.”

Ex. 14: 



What kind of note is it? (from left to right)	How many syllables will it get?	What are they? (the syllables)	Count out loud, tap your foot, and clap up to that note.
Sixteenth note	1	1	Tap your foot while saying “one” and clapping.
Sixteenth note	1	e	Keep your foot down while saying “e” and clapping.
Eighth note	2	& a	Raise your foot while saying “and” and clapping, then keep your foot up while saying “a” and <i>not</i> clapping.
Eighth note	2	2 e	Tap your foot while saying “two” and clapping, then keep your foot down while saying “e” and <i>not</i> clapping.
Sixteenth note	1	&	Raise your foot while saying “and” and clapping.
Sixteenth note	1	a	Keep your foot up while saying “a” and clapping.

Additional Rhythmic and Technical Development

Important: The following exercises will be presented in two sections. Generally, the first section has basically the same rhythms as the second section, but omits special techniques that are used by snare drummers. The numbered exercises in the two sections may be played simultaneously, and are differentiated by an “N” for non-drummers and a “D” for drummers; this can be useful for ensemble practice. Continue to use the “Strategic Practice Procedures,” including counting out loud and foot-tapping. Exercises 25N-31N are included in Section 1, though they exist primarily to accompany snare drum technique development Exercises 25D-31D in Section 2. While they can still be worth practicing as they provide reinforcement and some material in odd meter and with accents, non-drummers outside of an ensemble setting might want to consider skipping to the review/development Exercises 32N and 33N.

Section 1: for Non-percussionists/Non-drummers

For the following two exercises, please note: 5/4 is like 4/4 but with one extra beat per measure (count to 5), and 3/8 is like 6/8 but half as long (count “slow 3/8” with “1&2&3&” and “fast 3/8” with “1&a”).

Ex. 25N:



Ex. 26N:

