

Navigating Rhythms

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Mastering Meter, Music's Official Timekeeper

To play rhythms well, you need to be advanced enough on your instrument to hit notes accurately and in time. But you must also understand meters—which dictate how beats are organized into measures—and get a feel for how different rhythms work within each meter. We're going to cover some of music's trickier rhythmic challenges in this article, but before we do, let's step back and look at the foundation on which a song's rhythms are built.

TYPES OF METERS

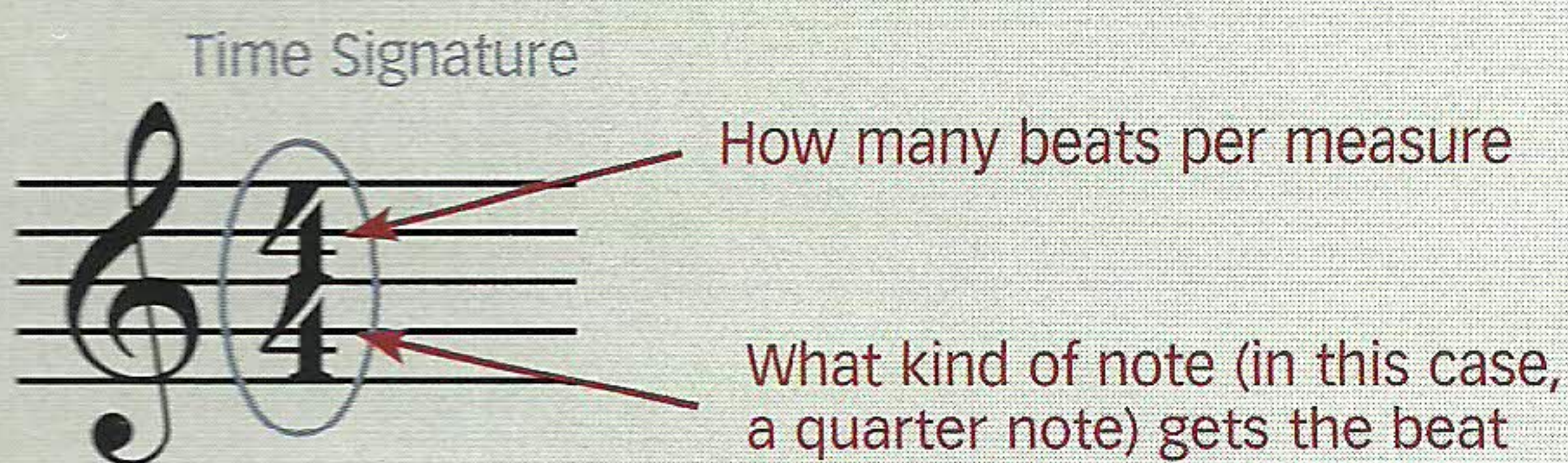
The meter dictates how many beats are in a measure and what kind of note (usually eighth, quarter or half) gets the beat (the *pulse*, or foot-tap). If you've been studying music for any length of time, you probably already know that meter

organizes the beats into measures, and that in notation, a time signature is used to describe the meter. Every piece of music has a built-in meter, even if it's not written down in any way. The time signature is an expression of that meter.

Now, the following might seem a little basic, but it's the framework from which we're going to tackle more complex meters and rhythms: The time signature consists of two stacked numbers and always appears at the beginning of a piece, just after the key signature. The bottom number in the stack tells you what kind of note gets one beat in the measure, but also gives you an idea of the feel, or pulse, of the music by showing where the accents usually occur. Let's take the meter 4/4: The bottom number is four, which means the quarter note gets one beat (see Ex. 1). Whenever you see 4/4, tap four beats and say, "1, 2, 3, 4," giving slightly more emphasis to beats 1 and 3 than to beats 2 and 4. That's how music will normally assemble itself under 4/4—unless it is syncopated.

Each meter can be classified according to four terms: *duple*, *triple*, *simple*, and *compound*. You can mix one from each group, resulting in four combinations: simple duple, compound duple, simple triple, and compound triple. Let's look at the easiest concept first, which you can do just by knowing your multiples of 2 and 3.

Example 1



Anatomy of a time signature: The meter is represented in notation by the time signature, which is always written at the beginning of a piece, or whenever the meter changes.

MIND YOUR THREE'S AND TWO'S

The first and easiest division is to determine *duple* and *triple* meter. In duple meter, the measure can be divided into two



equal parts. So $4/4$, $2/4$, $2/2$, $6/8$, and $12/8$ are all examples of duple meter. $3/4$ and $9/8$ are examples of triple meter. All you really have to do is look at the top number (how many beats per bar) and determine if it's divisible by 2. If it is, it's duple. When playing duple meters, it's useful to split the bar into two equal halves. This can be especially helpful when you're tackling complex rhythms within a bar.

If the top number is divisible *only* by 3, it's triple. So $3/4$ and $9/8$ are triple meters. On the other hand, $12/8$ and $6/8$ can be divided by three *and* two, but since the rule states that a triple meter is divisible *only* by 3, these meters are duple. Practically speaking, this means that they are "felt" in two—as bars which have two equal halves.

COMPOUNDING THE SIMPLICITY OF IT ALL

The difference between *simple* and *compound* meters can be a little trickier to grasp. *Simple meter* means that the *beat unit*—the bottom number—can be divided by 2. $4/4$, $3/4$, $2/2$, and $2/4$ are all simple meters because each of their beat units (4, 4, 2, and 4, respectively) is divisible by two.

But compound meters have their beats divisible by three. Now here's the tricky part. *Compound meters* don't follow the same rules as simple meters. For example, in $6/8$, "the rules" state that there are six beats to the measure and the eighth note gets one beat. But that is not quite true. The *pulse* of $6/8$ —the part you can tap to—is really a dotted quarter note. What's the numerical sign for a dotted quarter? There isn't one. This is one of those weird things in music that you just have to know, and that notation—which is not a perfect science—falls short of illustrating. So $6/8$ has a *pulse* of a dotted quarter note. (If you remember how dots work, that means "one-and-a-half quarter notes.")

So $6/8$ is a compound meter because its bars are divided as *two dotted quarter notes* per measure. One dotted quarter note equals three eighth notes (the "8" in $6/8$). So even though $6/8$ looks like it would equate to "six beats per measure and the eighth note gets one beat," it's really felt as "two beats per measure and the dotted quarter note gets one beat." If that seems a little weird, it might be helpful to break it down in the way most players actually count a measure of $6/8$: 1-and-a, 2-and-a. The pulse is on the 1 and the 2.

Cup of tea

Cup of tea
Cup of tea



COMMON METERS

Though technically you could use almost any two numbers to create a time signature, the fact is that most music uses only about six or seven. They are, roughly in order of popularity: 4/4, 2/2, 3/4, 6/8, 12/8, 2/4, 9/8. If you play a lot of classical music you may see 2/4 more often than 12/8. If you play a lot of blues, you'll be dealing with 12/8 more often than 6/8. Below is a description of five of the most popular meters.

4/4 (sometimes written as "C" for "common time") is an important meter not just because it looks like the most symmetrical (the top and bottom numbers are the same, which happens only one other time, in 2/2 meter) but because so much music has been written in it. We don't exactly know why 4/4 has triumphed mightily over all other meters, but that's just the way it is. Subdivide 4/4 by saying "1 and, 2 and, 3 and, 4 and." (Each "and" represents an eighth note.) Next, try it with 16ths, because this is the favorite groove of rap and hip hop, and funk and R&B: "1 e and a, 2 e and a, 3 e and a, 4 e and a." (The "e" and "a" represent the 16th notes between each quarter and eighth.) In 4/4 you usually emphasize beats 1 and 3, but not always: Emphasizing beats 2 and 4 gives the music a "backbeat" feel.

3/4 is often called "waltz time," because that's the style of music associated with the dance—I can still hear my aunt teaching me to waltz as a kid and saying 1 2 3, 1 2 3 while I stepped on her feet!—but many ballads are also written in 3/4. As with 4/4, you can use the word "and" to subdivide the beats ("1 and, 2 and, 3 and"). The strong beats in 3/4 are 1 and 3, and you'll often see the figure of a dotted quarter note, followed by an eighth note and a final quarter note.

2/2 or cut time is related to 4/4, and even looks equivalent when viewed as a fraction (although, remember, time signatures are not fractions). But in this case, the relationship of the top and bottom numbers in 2/2 is the same. There are two beats to the bar, and

the half note gets the beat. Cut time is used when a very prominent pulse is heard in an alternating bass note pattern, such as a polka, bluegrass, samba, and many Broadway show tunes. Musicians often call this bass an "oom pah" bass. It's often called "cut time" because the short-hand symbol of a line "cutting through" the "C" abbreviation for 4/4. In 2/2, the downbeat, or pulse, is even more prominent than in 4/4, especially in the bass.

2/4 is closely related to—and often indistinguishable from—2/2. Some musicians will argue that music in 2/2 is really in 2/4 and vice versa. Often it makes no difference to how the music is played or heard by the listener, only in how you write it down. Because 2/4 will involve more eighth- and 16th-notes compared to 2/2's quarters and eighths, it's a little more complex with regard to notation. Conversely, the measures in 2/4 go by slower, so if you're a good sight reader, it's easier to deal with 2/4 for long passages of music.

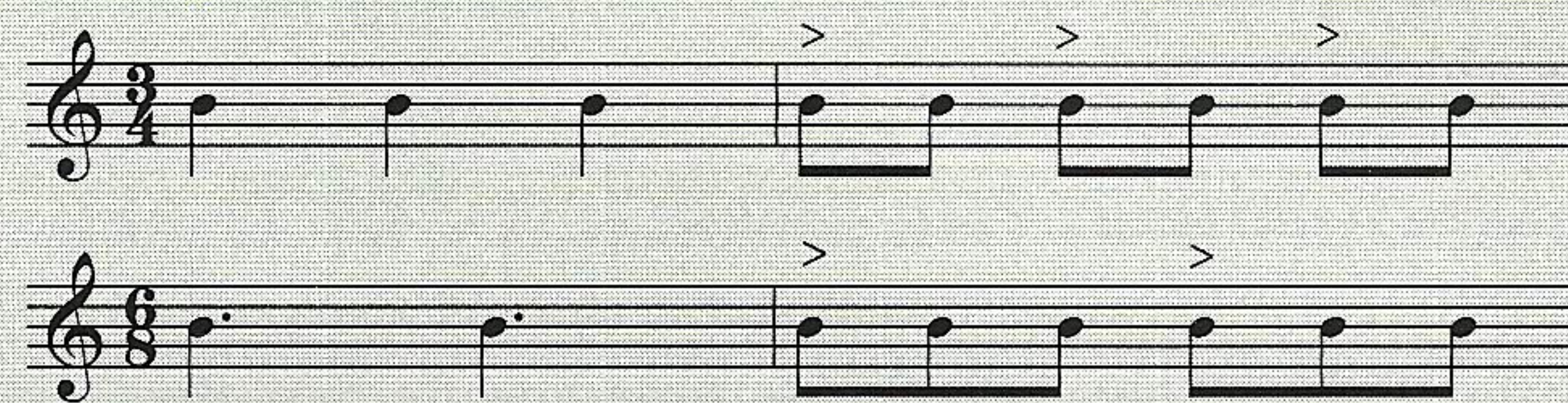
Many modern composers and arrangers have abandoned 2/4 and write everything that has a prominent "two beat" feel in 2/2—unless they're writing a piece in a style that specifically calls for 2/4 (like ragtime). The same principles apply to 2/4 about having very strong "bass beats."

6/8 is useful for combining three small rhythms into a larger group of two. This gives us the best of both worlds: the lilt of a triplet grouping (which we'll cover in a moment) within the regular confines of a two-group. 6/8 is surprisingly versatile; it can accommodate a march (like Sousa's "The Washington Post March") as well as a slow ballad (the Christmas carol "Silent Night"). To practice 6/8, say to yourself "1 and a, 2 and a" over and over to make sure you're feeling the bar as two groups of three—not three groups of two, as is the case for 3/4.

THE CURIOUS CASE OF 6/8 VS. 3/4

One great way to compare two different meters is to look at 3/4 and 6/8. At first glance, they seem interchangeable.

Example 2



3/4 and 6/8 both have six eighth notes to a bar. But the way these eighth notes are grouped creates an entirely different feel.

Both have six eighth-notes per bar. But if you remember our earlier definitions, 3/4 is a simple triple meter and 6/8 is a compound duple. That means the rhythms that appear within these two meters are different.

Look at Ex. 2 to see how the beats are defined. The way their respective rhythms are grouped gives each a different pulse—and conveys a different emotional mood.

HOLD IT!

Okay, now that we've worked so hard to define the rules according to meter, how do we go about breaking them? If we always created "music by the meter," every song in a time signature would sound pretty much the same. Fortunately, there are many ways to create variations within a given meter. One is to simply stop the meter's relentless flow from time to time, usually at the end of a musical phrase—the way we would do when speaking or writing sentences and paragraphs. This lets the music breathe, and gives the listener a rest from the regular march of the meter.

For example, an irregular bar—one in a different time signature from the rest of the song—can be used to lengthen the phrase. If you tack on a 2/4 or 3/4 bar at the end of a 4/4 passage and use a rest to stop the instruments from playing, the listener hears it effectively as a "stall," even though the time has been preserved (see Ex. 3, line 1).

The second way to stall the music is to actually suspend time. This allows the performer, conductor or band leader to use his or her own discretion in just how long to pause or hold a note, and it requires no rewriting of the meter. This "hold" or "pause" is called a *fermata*. Here, it's up to the performer to decide when the tempo should resume. Ex. 3, line 2 shows a fermata. If you're a singer, take a deep breath if you see one on the page: You might have to hold that note for a while!

A CUP-O-TUPLETS

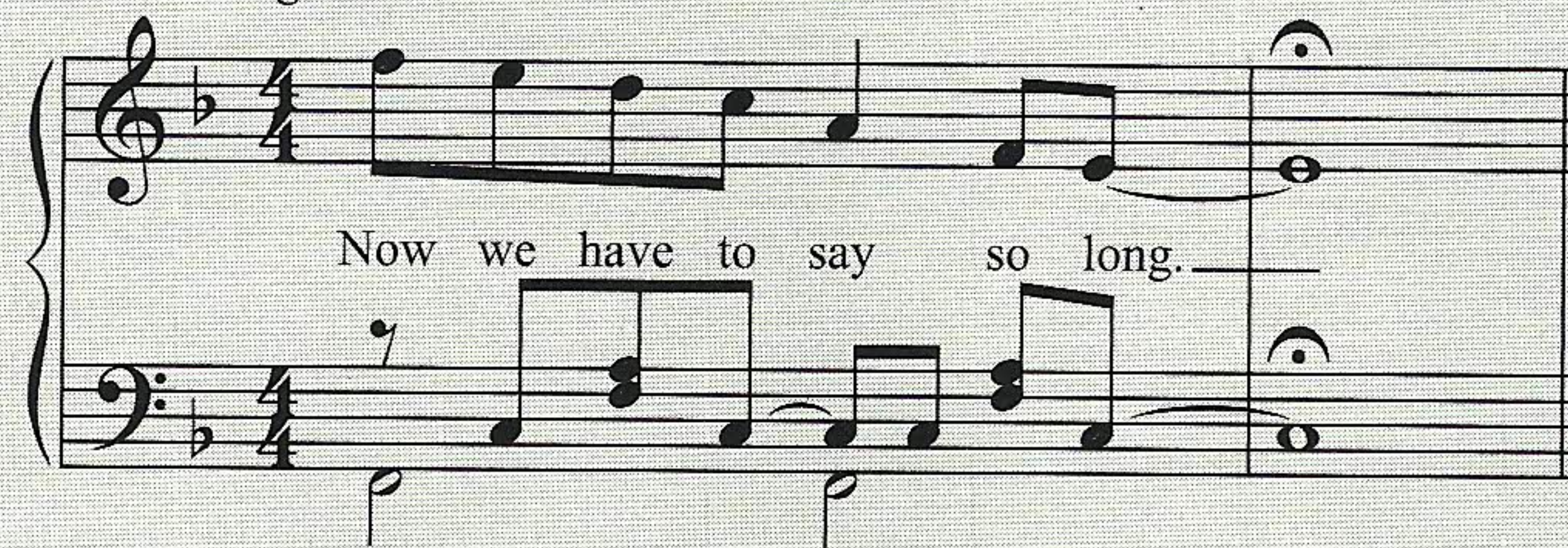
Another rhythmic figure that breaks the normal flow of the meter is the tuplet—most commonly seen as triplets, but also found in groups of five and seven. A tuplet lets you group together any number of notes under one or more beats and create a more complex rhythm. A tuplet is notated with a number above or below the grouping of notes it affects. That grouping is then distributed evenly over the beat (or beats). For example, a "3" above a group of three eighth notes means to play those three eighth notes within the space of two eighth notes, or one beat. One good way to count an eighth-note-triplet is to tap your foot and say "cup-o'-tea, cup-o'-tea" for each beat.

Example 3

With Feeling ♩ = 96



With Feeling ♩ = 96



Two ways of achieving a perceived abandoning of the meter: through an irregular bar with no subdivision in which to detect the pulse, and a temporary hold (a fermata) in the music.

EIGHTH NOTES IN SWING TIME

One style of music that seems to go against the time signature is swing jazz. To *swing* is to chop a beat up into unequal parts—something that is usually notated with dots or ties. But because jazz uses this swing rhythm so often, composers usually notate the music as though the beat consisted of two equal halves. This is sometimes referred to as *swing eighths*,

hold that note!



Techniques: Navigating Rhythms

where the two notes are not played exactly as half of the beat each, but where the first part of the beat is actually *twice as long* as the second part. It's as if each beat is really an eighth-note triplet; the duration of the first eighth note in the beat is equal to the *first two* parts of the triplet tied together, and the second eighth note covers the last part of the triplet. To get the feel of the swing eighth in your head, say "trip-o-let, trip-o-let, trip-o-let, trip-o-let" over and over, and then drop the "o" syllable—but leave the blank space in. You should now be saying "trip_let, trip_let, trip_let, trip_let," and it should have a slight lilt to it. That's the sound of the swing eighth and you can hear it in songs like Duke Ellington's "Satin Doll" and many a blues shuffle.

The actual conversion is shown in Ex. 4, and some sheet music will indicate this in a score direction. But not always: Jazz lead sheets often neglect to remind you that you're supposed to hold that first eighth note longer—it's so commonly done in jazz that it's assumed you know it. And now you do.

Dots, swing and triplets are only three of the ways that music can push the boundaries of the meter. Sometimes, beats are tied across more than one measure to give the music a feeling of anticipation. These rhythms can be difficult to grasp. But the sounding out techniques used for 16th notes (1 e and a) and triplets (cup-o'-tea) can help you here, too. Before you tackle a tricky rhythmic section, make it a habit to spell out the rhythms verbally.

CONTRAIRE AND CONTRAST

Contrasting rhythms can also grab the listener. For example, in "Say Goodbye to Love," R&B artist Kenna spices up a plain old 4/4 by putting a funky syncopated rhythm against a vocal melody of steady eighth notes (see Ex. 5). Neither figure is remarkable by itself: The syncopated backing part is the familiar clave rhythm, but is given a new treatment here, and because Kenna sings steady eighth notes over the top, it creates an exciting combination.

In the song "No One," by Alicia Keys (Ex. 6), the drums play a basic quarter note beat in 4/4. The piano plays steady eighth notes—eight per bar. But Keys uses her vocal talents to "riff" or dance on top of the fairly straightforward groove. It's in the *contrast* of the two different feels that the dramatic interest is achieved.

As an example where the elements are reversed, consider the Beach Boys' famous song "Surfer Girl" (see Ex. 7). It has a fairly stagnant melody in dotted quarter notes in 12/8 time. If you just stopped there, you'd wonder how a melody so "boring" could be a hit. But of course, it's not a *boring* melody, it's just *slow-moving*. The 12/8 meter allows the backing track to make things more interesting.

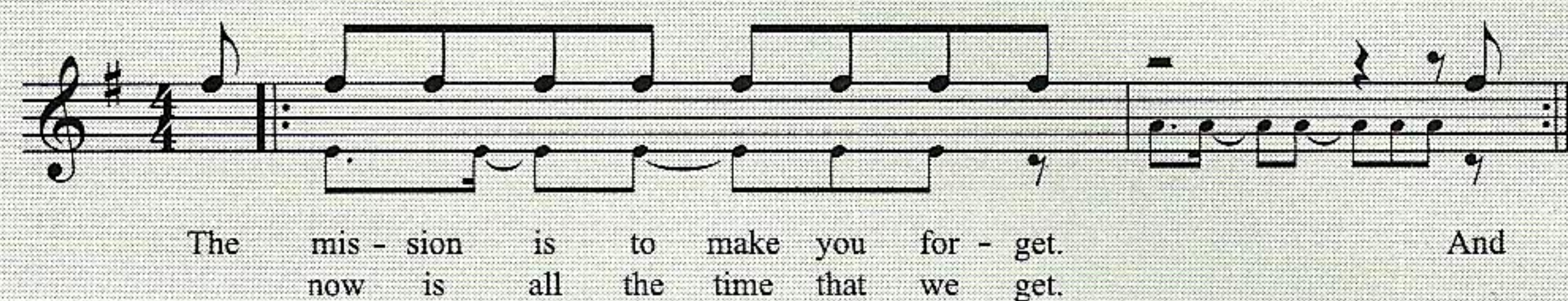
Playing or singing against a contrasting rhythm can take a lot of concentration, especially if you're doing two things at once, like playing left- and right-hand piano parts, singing while playing an instrument, or playing the drums. It can also happen in an ensemble where various instruments are playing different rhythms. Try not to be led by what the other instruments are playing, but instead focus on your own part.

Example 4

Swing feel ()

In a swing piece, two eighth notes are played as a triplet figure—whether it's indicated in the score or not.

Example 5



The lower rhythm is a condensed clave rhythm—a highly syncopated figure over which Kenna sings a one-pitch eighth-note melody.

Example 6



The drums thud away with a steady quarter note while the piano plays simple eighth-note arpeggios. But over the top of this, Alicia Keys sings a highly syncopated melody.

Example 7



The vocal melody may be slow-moving, but the arpeggios underneath help drive the song along.

Mastering meter and navigating rhythms take a lot of practice. Count in your head, tap your foot, spell out the rhythms, and work through all tricky passages slowly until you have the rhythmic relationships between the notes down cold. Do all those things, and becoming a master of the meter is only a matter of time.

The drawings in this story were contributed by high school senior Malti Jones of Katonah, New York, based on characters created by Chris Murphy.