

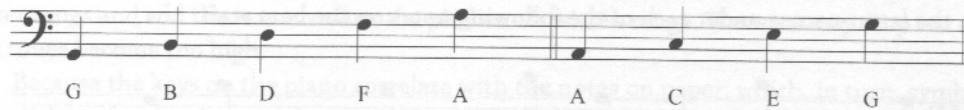
determined by the clef. When the treble clef (♩) is used, the staff lines are named **E, G, B, D, F** (Every Good Boy Does Fine) starting from the bottom; the spaces in between the lines spell **F, A, C, E** (again starting from the bottom). From the lead sheet (example 1.1) let us borrow the symbol of a blackened note with a stem (♩) to help us visualize the letter names on the staff. Note that the stems of the notes representing musical tones in examples 1.2—1.8 all change direction on the middle line of both the treble and bass staves.



Example 1.2

▶ [Sound file 1.1]

When the bass clef (♭) is used, the staff lines are named **G, B, D, F, A** (Good Boys Don't Fool Around) starting from the bottom; the spaces are **A, C, E, G** (All Cows Eat Grass), again from the bottom.



Example 1.3

▶ [Sound file 1.2]

Often the range of a musical composition requires the written notes to go beyond the scope of the five-line staff. For musical tones that lie over or under the staff, **ledger lines** (—) are added to continue the staff in either direction. See examples 1.4 and 1.5 below showing ledger lines in both treble and bass clefs. Note how the note names continue alphabetically with the ledger lines.



Example 1.4

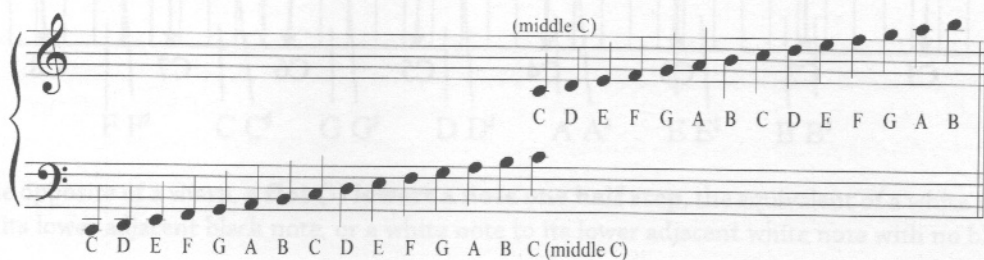
▶ [Sound file 1.3]



Example 1.5

▶ [Sound file 1.4]

You will notice that the first ledger line under the treble staff and over the bass staff is the note C. This note is **middle C**, C4 on the piano keyboard (see example 1.9 below), and serves as a connective between the bass and treble staves to form a “**Grand Staff**” that invariably appears in sheet music as the piano accompaniment to musical theatre literature (example 1.6 below).



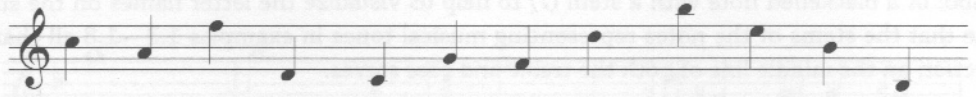
Example 1.6

▶ [Sound file 1.5]

Exercise 1

Write the letter names under each of the following notes on the treble staff.

Example 1.7



Write the letter names under each of the following notes on the bass staff.

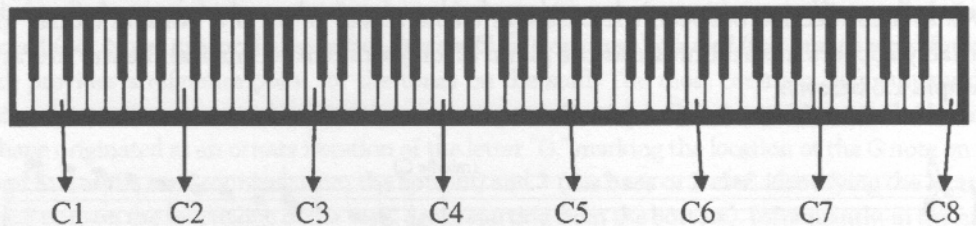
Example 1.8



Recognizing Pitches on the Piano Keyboard

Recognizing the written pitches on a piano keyboard is an important exercise for singers in training the ear to associate the notes on paper with actual sounds. The keyboard in example 1.9 below locates the eight keys on the piano that are called C. The keys on the piano keyboard follow the same pattern as the notes on the Grand Staff (example 1.6 above) and ascend alphabetically C, D, E, F, G, A, B until the next C is reached. The distance from one C to another above or below it is called an octave since the Cs are eight keys apart (counting the first and last keys of the series). Though an eighty-eight-key piano comprises the ranges of all the instruments in the orchestra, the octaves above and below middle C (or C3 to C6 on example 1.9) are the primary concern of musical theatre professionals.

Example 1.9



Example 1.18

Example 1.18 shows four staves of music. The first staff starts with a whole rest, followed by quarter notes, a half note, and a quarter note. The second staff starts with a half note, followed by a whole rest, a quarter note, and a quarter rest. The third staff starts with a quarter note, followed by a quarter rest, a quarter note, and a quarter rest. The fourth staff starts with a quarter note, followed by a quarter rest, a quarter note, and a quarter rest.

The lead sheet at the beginning of this unit displays another simple way to add duration to a note: a **tie**, a curved line that connects two notes of the same pitch. See, for example, measures 9, 11, 17, 21, 23–24, 25, 26–28, 33–34, 36, 37–38 of example 1.1.

Rests

The lead sheet also introduces another important group of symbols we find throughout musical theatre literature: **rests**, stopping places in the flow of the melody that often herald a change of thought or emotion, and give the performer the opportunity to breathe. As example 1.19 below illustrates, every note symbol has its equivalent rest.

Example 1.19

Example 1.19 shows four staves of music, each with a note and its corresponding rest. The first staff shows a double whole note and a double whole rest. The second staff shows a half note and a half rest. The third staff shows an eighth note and an eighth rest. The fourth staff shows a thirty-second note and a thirty-second rest. The fifth staff shows a sixteenth note and a sixteenth rest. The sixth staff shows a sixty-fourth note and a sixty-fourth rest.

Like notes, **rests can be augmented by the use of dots; ties are never used to add time to a rest.**

Meter and Time Signature

Returning once again to the lead sheet that begins this unit you will notice two musical symbols that immediately follow the clef signs. The first is a flat on the B line that informs the performer that all the B notes in the song are flatted. This is called a **key signature**, a musical tool that will be addressed more fully in the next unit. After the key signature, a C with a line through it appears on the lead sheet to inform the performer of the number of **beats** (foot taps) in each measure, and which note determines the beat. This symbol is called a **time signature** and is the next subject of discussion.

If you were to tap your foot when speaking a verse line from a Shakespearean play, for example, you will find five beats (underlined): “But soft! What light in yonder window breaks?” (*Romeo and Juliet*, Act 2, scene 2). This is because Shakespeare wrote in iambic pentameter—a meter of five beats. Other poets write in different meters. Joyce Kilmer, for example, created “Trees” in a four-beat line: “I think that I shall never see,” while William Butler Yeats produced “A Cradle Song” with two beats per line: “The angels are stooping.” Just as the lyrics to a song are organized according to a poetic meter and rhyme scheme, musical tones are governed by a **meter** that organizes the duration of notes and rests into **measures** (or bars) defined by vertical **bar lines** (the lead sheet at the beginning of this unit exemplifies this pattern). As we noted at the beginning of this unit, **single bar lines** are used to divide measures; **double bar lines** are used to separate sections of a musical composition; and a **shaded double bar line** indicates the end of the piece.

The **meter of a musical composition is identified by a time signature**, in which two numbers appear, one above the other (like the numerator and denominator of a fraction, but without the division line). The **top number identifies the number of beats in a measure**, and the **bottom number reveals what kind of note will define the beat**. C, or common time, is the same as 4/4, in which the top number tells us that there are four beats to a measure, and the bottom number reveals that the quarter note gets the beat. C and C, or cut time (two beats to the measure, the half note gets the beat), are traditionally the most frequently used time signatures in musical theatre literature. “You Have Cast Your Shadow on the Sea” from *The Boys from Syracuse* (example 1.20 below) is a fine example of a Richard Rodgers ballad in common time, and “There’s a Small Hotel” from *On Your Toes* (example 1.21 below) is a typical Rodgers rhythm ballad in cut time.

Example 1.20 shows two staves of music in 4/4 time. The first staff contains the lyrics "You have cast your shadow on the sea, On" with beat numbers 1-4 under each measure. The second staff contains the lyrics "both the sea and me." with beat numbers 1-4 under each measure. The music consists of quarter notes and half notes, with a final half note in the second measure of the second staff.

Example 1.20

[Sound file 1.6]

In example 1.20, it is easy to feel four beats in every measure (one, two, three, four) with a primary accent on the first beat (or **downbeat**) of every bar, and a secondary accent on the

Example 1.19

third beat (the accented beats are considered **strong beats**, the unaccented beats are called **weak beats**). The **unaccented beat** before a downbeat is typically referred to as the **upbeat**. The lyrics correspond exactly to both the contour of the melody line and the implied accents of the time signature. Compare this, now, with “There’s a Small Hotel,” a tune that resembles a song in common time but that is counted, instead, in cut time (one, two) with the primary accent on the first beat, and a secondary accent on the second beat. Note that, because cut time has two beats to the measure and the half note receives the beat, it is often written as 2/2 in Western music, though musical theatre composers tend to prefer the familiar symbol \mathcal{C} .

Example 1.21



Musical notation for Example 1.21 in cut time (C). The melody consists of quarter notes and dotted half notes. The lyrics are: "There's a small ho-tel with a wish-ing well; I wish that we were there to - geth - er."

1 2 1 2 1 2 1 2 1 2 1 2 1 2

It is easy to tap two beats to a measure with “There’s a Small Hotel” even though the distribution of quarter notes, half notes, and dotted-half notes in the opening melodic statement is not unlike that of “You Have Cast Your Shadow on the Sea.” Both melodies employ the same kinds of notes but the difference in meter leads the performer to interpret, or “feel” them differently. Also like “You Have Cast Your Shadow on the Sea,” the operative words in the lyrics of “There’s a Small Hotel” correspond to the song’s melodic contour as well as the metrical emphases of cut time.

Simple Time Signatures

In common time and cut time, it is possible to **subdivide the principal beats into two**:

Example 1.22

Musical notation for Example 1.22 (top) in 4/4 time. The melody consists of quarter notes and eighth notes. The lyrics are: "1 2 3 4 1 + 2 + 3 + 4 +"

Musical notation for Example 1.22 (bottom) in 2/2 time. The melody consists of half notes and quarter notes. The lyrics are: "1 2 1 + 2 +"

In common time, since the beat is given to quarter notes, the subdivision is counted in eighth notes; in cut time, since the beat is given to half notes, the subdivision is counted in quarter notes. In each case, the subdivision is given to the next lowest group of notes; so, if the beat were given to whole notes, the subdivision into two would go to half notes; if the beat were given to eighth notes, the subdivision would be in sixteenth notes, and so forth. When beats are subdivided, the **antecedent** or numerical part of the beat (1, 2, 3, etc.) is considered the **strong** part of the beat while the **consequent** or “and” part of the beat is considered the **weak** part of the beat. **Time signatures in which the beat can be subdivided into 2 are called simple time signatures.** Both common time and cut time are simple time signatures.

“Eager Beaver” from *No Strings* (example 1.23) and “I Think I’m Gonna Like It Here” from *Annie* (example 1.24) offer more recent examples of simple common time and cut time with the beat divisions marked.

What makes an ea-ger bea-ver ea-ger to be bus-y? _____
1 + 2 + 3 + 4 + 1 + 2 + 3 + 4 + 1 + 2 + 3 + 4 + 1 + 2 + 3 + 4 +

Example 1.23

[Sound file 1.8]

think I'm gon-na like it here. _____
1 + 2 + 1 + 2 + 1 + 2 + 1 + 2 + 1 + 2 +

Example 1.24

[Sound file 1.9]

In both examples, the beat is easy to tap and subdivide into binary units.

Another simple meter that is popular in musical theatre literature is 2/4 (**two beats to a measure, the quarter note receives one beat**). With the primary accent on the first beat and a secondary accent on the second beat, this meter is especially suited for the creation of patriotic marches (“I’m a Yankee Doodle Dandy” in *Little Johnny Jones*), polka-like rhythm production numbers (“If This Isn’t Love” in *Finian’s Rainbow*, “Once-A-Year Day” from *The Pajama Game*, “The Game” in *Damn Yankees*, and “Down On MacConnachy Square” in *Brigadoon*), and catalog songs (“The Love of My Life” in *Brigadoon* and “Ah, Paris!” from *Follies*). A more contemporary usage of the meter can be found in the score to *Les Misérables* in the militaristic patter, “Master of the House” (example 1.25). Note that when the beat is subdivided into four parts, the pattern is counted “one ee and a(uh), two ee and a.”

Mas-ter Of The House, dol-ing out the charm,
1 ee + a 2 + 1 ee + a 2 +

read-y with a hand-shake and an o-pen palm.
1 ee + a 2 ee + a 1 + 2 +

Example 1.25

[Sound file 1.10]

Other Simple Time Signatures

Although 4/4 (common time), 2/2 (cut time), and 2/4 may be the most frequently employed meters in musical theatre literature, many other simple duple (two-beat) and quadruple (four-beat) meters exist in Western music. In addition to 4/4, for example, 4/8 (**four beats to the measure, the eighth note gets the beat**), 4/16 (**four beats to the measure, the sixteenth note gets the beat**), and 4/2 (**four beats to the measure, the half note gets the beat**) are commonly used. “It Must Be So” (example 1.26 below) from Leonard Bernstein’s *Candide* makes use of 4/2 as well as an example of simple triple meter, 3/2, in which there **are**

Example 1.26

[Sound file 1.11]

Although the 3/2 time signature is found infrequently in musical theatre songs, Bernstein makes ample use of it in “A Boy Like That” and throughout *West Side Story*. Stephen Sondheim also makes dramatic use of the meter in “Liaisons” (*A Little Night Music*).

A more common simple triple meter in musical theatre literature is 3/4 (**three beats to the measure, the quarter note gets the beat**, and the accent falls on the first beat). Often considered waltz time, 3/4 is counted “1 and 2 and 3 and” with a stress on the downbeat and the quarter-note beat subdivided by eighth notes. The world of musical theatre is filled with famous waltzes: from George M. Cohan’s “Forty-Five Minutes from Broadway” (*Forty-Five Minutes from Broadway*) to Jerome Kern’s “You Are Love” (*Show Boat*); from Richard Rodgers’s, “Falling in Love with Love” (*The Boys from Syracuse*) to Jerry Bock and Sheldon Harnick’s “Til Tomorrow” (*Fiorello!*); from Charlie Smalls’s “Be a Lion” (*The Wiz*) to Stephen Sondheim’s “Last Midnight” (*Into the Woods*); from Larry Grossman’s “No More Mornings” (*A Doll’s Life*) to nearly the entire score of Sondheim’s *A Little Night Music*. In a more contemporary musical setting, Benny Andersson, Tim Rice, and Björn Ulvaeus use the 3/4 meter to great effect throughout *Chess*, particularly in the dramatic ballad, “Where I Want to Be” (example 1.27).

Example 1.27

[Sound file 1.12]

Often melodies in simple triple meter are written in 3/8 (**three beats to the measure, the eighth note gets the beat**), or 3/16 (**three beats to the measure, the sixteenth note gets the beat**) rather than 3/4 or 3/2 as above. Often 3/8 and 3/16 suggest a quicker tempo than 3/4 or 3/2 and instead of being counted in three (“one two three”), **they are often counted in one** (“one and a”), still with the accent on the downbeat. In the vocal score of *West Side Story*, composer Leonard Bernstein sets the tempo for “I Feel Pretty” at ♩ = 66+, indicating that the note establishing the beat of the piece is a dotted quarter rather than the eighth note (example 1.28 below). The number, incidentally, is a reference to the use of a metronome to indicate the exact tempo of a composition by clicking a specific number of beats per minute (see Tempo Marks later in this unit).

Compound Time Signatures

When a song in 3/8 is counted “one two three,” it is considered simple triple meter because the top number gives the number of beats in the measure, and the bottom provides the kind of note that gets the beat. When a song in 3/8 is counted in one beat, however, the top number no longer suggests the number of beats in the measure. Instead, it informs the performer of the number of **divisions of the beat** within a measure, and the **bottom number** indicates **what kind of note creates the division**. In “I Feel Pretty” the time signature tells us that the beat is divided into three eighth notes; as a result the beat is a dotted quarter note since it can be subdivided into three eighth notes. **When the beat can be subdivided into three equal parts rather than two, the beat will always be expressed as a dotted note and the meter will be compound rather than simple.**

I feel pret-ty, Oh, so pret-ty, I feel pret-ty and wit-ty and
1 + a 1 + a 1 + a 1 + a 1 + a 1 + a 1 + a

Example 1.28

[Sound file 1.13]

Note that the vocal line of “I Feel Pretty” does not begin on the downbeat but on the “and” or weak part of the beat, creating a displacement of the traditional metrical accent. Such a temporary rhythmic displacement is called **syncopation** and is discussed more fully later in this unit. Dramatically the device is quite effective in portraying Maria’s breathless excitement at being in love.

The principal compound meters employed by musical theatre composers are 6/8, 9/8, and 12/8 (see example 1.29 below). Leonard Bernstein employs 6/4 in “Lud’s Wedding” (*1600 Pennsylvania Avenue*) and 9/4 in “My Love” (*Candide*) but uses of those compound meters are infrequent in musical theatre songs. Stephen Sondheim may have composed “Sorry, Grateful” (*Company*) in 6/4 but the beat is counted in six quarter notes (as a simple meter) rather than in two dotted half notes, each subdivided by three quarter notes. Remember, **in compound meter, the beat is always a dotted note subdivided into three equal parts**. Because of this three-part division of the beat, the top note of the time signature of a compound meter will always be divisible by three. The top line of the following example of compound meters displays the beat note while the bottom staff indicates the divisions of the beat.

1 + a 2 + a 1 + a 2 + a 3 + a 1 + a 2 + a 3 + a 4 + a

Example 1.29

Stephen Sondheim uses all of the above meters for dramatic effect in *Into the Woods*. Often associated with **folk dances**, 6/8 is the meter Bernstein used to begin the “Prologue” in *West Side Story*. It is the meter of a **jig** (“Go Home with Bonnie Jean” in *Brigadoon*), a **tarantella** (“Merano” in *Chess*), and a **march** (“Seventy-Six Trombones” in *The Music Man*). It is also the meter of a **barcarolle**, a boat song of Venetian gondoliers, composed with a monotonous accompaniment designed to suggest the undulation of the waves and the movement of the boat. Sondheim uses this barcarolle meter to explore the “Agony” experienced by Cinderella’s Prince and Rapunzel’s Prince (example 1.30). The softly undulating accompaniment and easily flowing melody provides an ironic background to the princes’ misfortunes. Note that the first three

measures of the example below employ sixteenth notes creating the necessity of subdividing the beat into six, rather than the usual three, parts. In such cases, the count would follow the pattern: one-ee-and-ee-a(uh)-ee, two-ee-and-ee-a(uh)-ee, etc.

Example 1.30
[Sound file 1.14]

Did I a-buse her or show her dis-dain? Why does she run from me? _____
1 ee+ ee a 2 + a 1 ee+ ee a 2 1 ee+ ee a 2 + a 1 2

In musical theatre literature, **6/8 is often juxtaposed with 3/4** since both meters can be divided into six eighth notes. “America” (*West Side Story*) is possibly the most familiar example of the trade-off between “one-and-a, two-and-a” and “one-and, two-and, three-and,” but “A Secretary Is Not a Toy” (*How to Succeed in Business without Really Trying*) also explores the nuance created by exposing the same melodic line to those two different meters. The device is also dramatically effective in *The Music Man* where a melody in 3/4 is called, “Goodnight, My Someone” and the same tune in 6/8 is labeled “Seventy-Six Trombones.”

Sondheim’s use of compound meters in *Into the Woods* continues with “On the Steps of the Palace” (example 1.31), in which Cinderella muses on the merits of her prince in 6/8, the same flowing meter as “Agony.” However, her contemplations begin in 9/8 to allow rests between the fragmented musical statements, giving her the opportunity of thought and realization to help her form the ideas she expresses. Note that the vocal line does not begin on the downbeat but on the “and” of the second beat, creating a syncopation that dramatically portrays Cinderella’s thought processes and spontaneous conclusions.

Example 1.31
[Sound file 1.15]

He's a ver-y smart prince. He's a prince who pre-pares.
1 2+ a 3+ a 1 2 3 1 2+ a 3+ a 1 2 3

Earlier in the musical, Little Red Ridinghood sings “Into the Woods” (example 1.32), a jaunty, folk-like, hopscotching tune in 12/8 designed to evoke a child’s nursery rhyme.

Example 1.32
[Sound file 1.16]

In-to the woods, it's time to go, I hate to leave, I have to, though.
1 + a 2+ a 3+ a 4+ a 1+ a 2+ a 3+ a 4

In-to the woods, it's time, and so I must be-gin my jour-ney.
1 + a 2+ a 3+ a 4+ a 1+ a 2+ a 3 4

It is easy to imagine a young Red Ridinghood skipping merrily through the forest to the meter of Sondheim’s musical setting. With a somewhat more aggressive bass and consecutive eighth notes pounding the harmony, 12/8 is also characteristic of 1960s rock and roll and appears with frequency in retrospective musicals, such as *Hairspray* (in the songs, “It Takes Two” and “I Know Where I’ve Been”) and *Beehive* (“Where the Boys Are,” “You Don’t Own Me,” and “Believe Me”).

Infrequently Used Time Signatures

A variety of other time signatures appear infrequently in musical theatre songs. “Everything’s Alright” (*Jesus Christ Superstar*) is written in 5/4 (**five beats to the measure, the quarter note gets the beat**); “Pity the Child” (*Chess*) fluctuates between 4/4, 3/4, and 7/4 (**seven beats to the measure, the quarter note gets the beat**); “So Much to Do in New York” (*Song and Dance*) is written in 5/8 (like 5/4, there are **five beats per measure, but in this case the eighth note gets the beat**); and “The Mountain Duet” (*Chess*) depicts an awkward situation dramatically that rises and falls between 6/8, 2/4, 5/8, 3/4, 9/8, 7/4, 3/8, and 4/8.

Exercise 6

Determine the time signature for each line of music, drawing bar lines after each completed measure (i.e., when the measure has enough beats in it). Once the time signature and bar lines have been determined, write the counts under each measure and clap the rhythms.

The image shows seven lines of musical notation, each starting with a treble clef and a key signature of one flat. The lines contain various rhythmic patterns for time signature identification:

- Line 1: A sequence of notes including quarter notes, eighth notes, and a dotted quarter note.
- Line 2: A sequence of notes including quarter notes, eighth notes, and a dotted quarter note.
- Line 3: A sequence of notes including quarter notes, eighth notes, and a dotted quarter note.
- Line 4: A sequence of notes including quarter notes, eighth notes, and a dotted quarter note.
- Line 5: A sequence of notes including quarter notes, eighth notes, and a dotted quarter note.
- Line 6: A sequence of notes including quarter notes, eighth notes, and a dotted quarter note.
- Line 7: A sequence of notes including quarter notes, eighth notes, and a dotted quarter note.

Example 1.33

Tuplets

The “one-and-a” beat of compound meters inspired composers to look for ways to integrate it into simple meters. The challenge they faced was obvious: simple meters divided beats into groups of two, not groups of three. To solve the problem, **tuplets** were invented to divide the beat into untraditional groupings. In 4/4 or common time, a tuplet called a **triplet** could allow three eighth notes to function in the place of two; and even three quarter notes grouped as a triplet could take the place of two quarter notes (see example 1.34 below, “The Telephone Hour” from *Bye Bye Birdie*). Note the syncopation in measures 1, 4–7 where the vocal line follows a rest on the downbeat, creating the musical illusion of a spontaneous conversation.

Example 1.34
 [Sound file 1.17]

Go-in' stead-y, you know it, man! Go-in' stead-y, it's cra-zy, man! Go-in' stead-y, you know it,
 It won't last! Not at all! He's too thin! She's too tall.

Triplets are used effectively throughout musical theatre literature from traditional scores such as *Oklahoma!* (“Many a New Day”), *The King and I* (“Getting to Know You”), *Great Day* (“More Than You Know”) and *Nick and Nora* (“Is There Anything Better Than Dancing?”), to concept shows such as *Cabaret* (“Two Ladies”) and *Into the Woods* (“It Takes Two”), to pop-sounding musicals such as *The Wiz* (“If You Believe”) and *Hairspray* (“Good Morning Baltimore”).

When counting eighth-note triplets that take the place of two eighth notes in simple meter such as 4/4, divide the beat into three (just as you would divide the beat in a compound meter) and count the triplets as “one-trip-let, two-trip-let, three-trip-let, four-trip-let.” When counting quarter-note triplets that take the place of two quarter notes, consider every 4/4 meter a 2/2 meter so that a half note (which equals two quarter notes) will get the beat. Divide the beat into three parts (just as you divided the beat for eighth-note triplets), then count “one-trip-let, two-trip-let.” Although the triplets in simple meters may sound like the subdivisions of the beat in compound meters, it is important to remember that the beat in simple meters is not a dotted note.

Another successful merging of compound meter with simple meter occurs when the composer writes “**swing it**” above a melody written in simple meter. Instead of singing straight eighth notes (as in the first measure of example 1.35), the performer sings a quarter note and eighth note pattern (♩♪) as if the passage were written in compound meter (as in measure three of example 1.35).

Example 1.35
 [Sound file 1.18]

“Swing it!” Sounds like:

Beaming

You may have noticed throughout the book thus far that, in the examples, eighth notes and sixteenth notes are often joined together by a horizontal line. This line is called a **beam** and it is an important tool in **grouping notes together so that the meter of a composition is clearly laid out**. We have seen how different meters are subdivided and counted; how certain beats are given primary accents and others, secondary accents. It is the function of beaming to clarify the beats and accents of a given meter so that the rhythmic aspect of a piece of music is immediately clear to the performer. Example 1.36 below illustrates beaming in several different meters. The correct way of beaming to the right would make the meter immediately discernible to the performer; the incorrect way of beaming to the left would leave the performer metrically confused.

Example 1.36 consists of six musical staves, each showing two measures of music. The first measure is labeled 'Wrong' and the second 'Right'. The meters are: 2/4, 3/4, 4/4, 6/8, 3/2, and 12/8. In the 'Wrong' examples, notes are beamed from right to left, obscuring the meter. In the 'Right' examples, notes are beamed from left to right, clearly defining the meter.

Example 1.36

There are occasions, however, when the traditional accents are purposely obscured in order to emphasize weak beats or displace the downbeat of a meter. Such is the objective of **syncopation**, the next topic for discussion.

Syncopation


We have encountered the term syncopation several times in this unit to demonstrate how meter works musically and dramatically in musical theatre songs. **Syncopation, the**

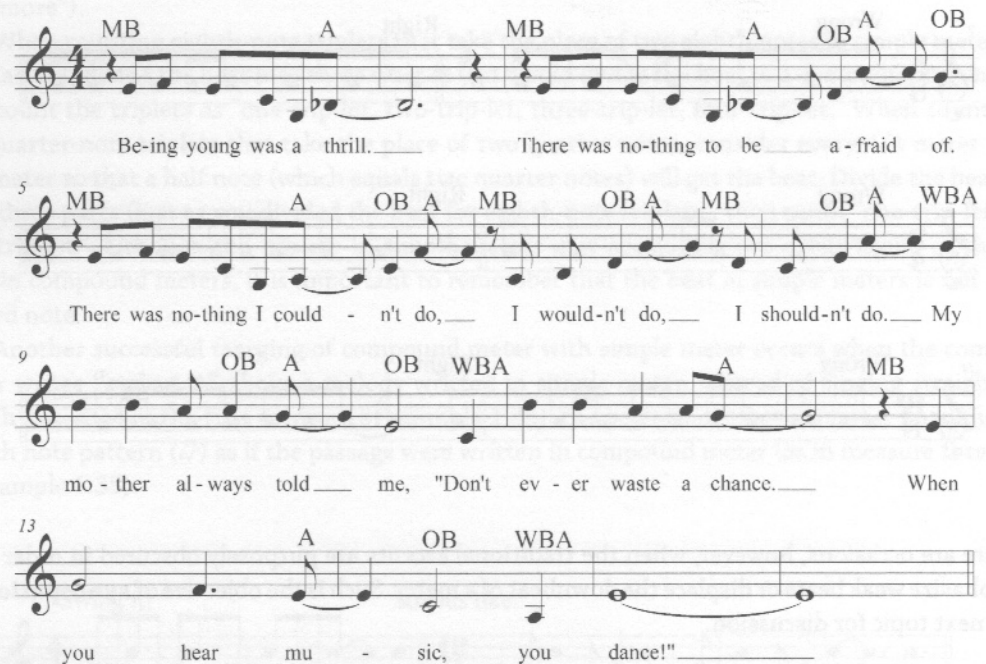
displacement of natural accents in music, or, what many performers think of as singing “off the beat” is virtually ubiquitous in musical theatre literature. It occurs so frequently in every musical theatre student’s repertoire that it is often difficult for students to understand why a particular note, or group of notes, is a displacement of what is supposed to be a natural accent. As we have discussed earlier, the normal accents in common time occur on beat one and three, rendering them the strong beats in a measure. Similarly, we have found that every beat division has a strong and weak part, and that even weak beats (two and four) have strong and weak parts when divided. **Syncopation occurs when there is a rhythmical stress or accent at a metrically weak place in the measure causing the rhythm temporarily to contradict the meter.**

There are four principal types of syncopation that can be found in musical theatre literature:

- **Anticipations (A):** when a note begins on a weak beat (or weak part of a beat) and is tied to a strong beat (or part of a beat);
- **Weak-Beat Accents (WBA):** when the accents in a measure fall on weak beats (two and four in common time) rather than one and three, or on weak parts of beats (the “and” part of beat division);
- **Missed Beat (MB):** when a rest replaces one of the four beats in common time, the note following the rest is emphasized, even if it is on a weak beat or part of a beat;
- **Off-Beat (OB):** similar to Weak-Beat Accents, when the long notes in a measure occur on weak parts of the beat rather than on the strong parts of the beat as expected (i.e., in common time, when ♪♪♪♪ is played instead of ♩♪♪♪, where the quarter notes fall on the strong part of every beat). Performers often refer to this type of syncopation as **back phrasing**.

“When I Hear Music (I Dance)” from *Out of Line* exhibits a variety of syncopations in example 1.37 below.

Example 1.37
 [Sound file 1.19]



Be-ing young was a thrill. There was no-thing to be a - fraid of.

There was no-thing I could - n't do, I would-n't do, I should-n't do. My

mo - ther al - ways told me, "Don't ev - er waste a chance. When

you hear mu - sic, you dance!"

Notice how the melody begins on beat two, instead of the usually accented beat one, and how, in the first six bars, the first beat of the second measure of each phrase is anticipated by tied notes. When the first beat is finally attacked by a weak eighth note in measures 7–8, the melody immediately leaps away. It is only from measure 9 that the downbeat becomes strongly established, first with quarter notes, then a half note, and finally a whole note. The alternation of syncopation with natural accents is carried through the lyric as well, beginning with an exuberant freedom that is juxtaposed with the mother's advice using longer notes and more traditional accents for emphasis. Syncopations continue, however, to remind the listener that the song is sung from the point of view of the child, not the parent.

Exercise 7

Using the acronyms, A, WBA, MB, OB, identify the types of syncopation above the notes in the following musical theatre examples.

- Example 1.38 is a fragment of “Timeless to Me” from *Hairspray*;
- Example 1.39 is a sample of “Big, Blonde and Beautiful” also from *Hairspray*;
- Example 1.40, “The Last Night of the World” is from *Miss Saigon*;
- Example 1.41 is a portion of “Last Midnight” from *Into the Woods*;
- Example 1.42 is another excerpt from *Hairspray* called “Welcome to the Sixties”;
- Example 1.43, “All American Prophet” comes from *The Book of Mormon*.

Note also how these examples demonstrate the use of accidentals, grace notes, and special note heads.

Some folks don't get it, but we nev-er fret it 'cause we know that time is our friend. _____

Example 1.38

[Sound file 1.20]

Pinch of su - gar and a dash of spice. I'll

Example 1.39

[Sound file 1.21]

let you lick the spoon be - cause it tastes so nice.

Example 1.40

[Sound file 1.22]

Tell-ing me to hold you tight and dance like it's the last night of the world.

Example 1.41

[Sound file 1.23]

Like his son will be too, Oh, why both - er? _____

Example 1.42

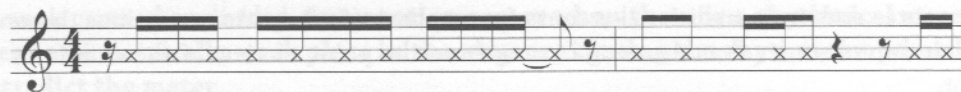
[Sound file 1.24]



Hey ma-ma, hey ma-ma look a-round! Ev - 'ry-bod-y's groov-in' to a brand new sound.

Example 1.43

[Sound file 1.25]



I'm gon-na take you back to Bib-li-cal times, Eigh-teen-Twen-ty-three. An A-



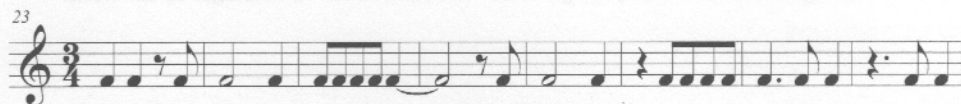
mer-i-can man named Joe, liv-in' on a farm in the ho-ly land of Roch-es-ter, New York!

Other musical theatre songs that make extensive use of syncopation and are useful for study are “Heat Wave” (*As Thousands Cheer*), “There’s No Business Like Show Business” (*Annie Get Your Gun*), “You’re Never Fully Dressed without a Smile” (*Annie*), “Do Me a Favor” (*Carrie*), “Black and Blue” and “The Joint Is Jumpin’” (both from *Ain’t Misbehavin’*), “You and Me (But Mostly Me),” “Two by Two,” and “Hasa Diga” (all from *The Book of Mormon*), “Boom, Chica Boom” (*Nick and Nora*), “Call Me Savage” (*Fade Out—Fade In*), “My Daddy Always Taught Me to Share” (*Grind*), and “The Nicest Kids in Town” (*Hairspray*).

Exercise 8

Write in the counts underneath the notes for the following meters. Be careful to include the counts for all the divisions of beats where appropriate. Once you have determined the correct counts for each meter, clap the rhythm, then speak it using the counts you have written. At the discretion of your instructor, try playing the rhythms on the piano.

Example 1.44



Musical Terms and Symbols

31

37

43

Example 1.44
(Continued)

33

Exercise 9

Let us return to the lead sheet that began this unit. Write the letter name below each of the notes in the lead sheet. You will recall that the B \flat after the clef sign is called a **key signature** indicating that all Bs in the piece are flatted, except where otherwise indicated. Above each note, state what kind of note (quarter, half, etc.) it is. Above each rest, identify its name. Circle every example of syncopation as it appears in the lead sheet, and identify it using the acronyms A, WBA, MB, and OB.

5

Got a rain-bow 'round my shoul-der, Got my hon-ey wait-in' at the

Example 1.45

[Sound file 1.26]

Pickup Measures

Example 1.46 above is an excerpt from Harigoula's comic suicide, "Ain't Am I Then Forsaken," in the 1922 musical *Happy Harmonies of the East*, adapted for a twentieth-century play by

9

sta - tion: I'm so hap-py I could dance the boo-gie!

13

Soon she'll kiss me, then I'll hold her. Ain't it fun-ny? Such an - ti - ci -

Example 1.45
(Continued)

17 pa - tion: It just makes me wan - na dance. For some a

21 fav - 'rite haunt sa - loon ___ might make the grade, ___ If

25 all they want's the "Moon - light Se - re - nade" _____ played. _____

29 As for me, my feet are frisk - y, The beat is brisk e - nough ___ to make me

33 prance. _____ Might seem at first glance that

37 I have found ro - mance, ___ Cuz I'm so hap - py, I'm so

41 ver - y hap - py. Yes - sir, I'm so hap - py I could dance!

2

Major and Minor Scales

And laughed be - fore, and loved be - fore, But who knows where or when!

Example 2.1

[Sound file 2.1]

The ascending stepwise arrangement of seven different tones from middle C to the C above it at the end of Richard Rodgers's "Where or When" in his 1937 musical *Babes in Arms* (example 2.1 above) draws our attention to the subject of major and minor scales. From medieval times, the seven named musical tones (i.e., A, B, C, D, E, F, G) have been arranged on the staff in ascending (or descending) stepwise order from a **tonic** tone, or **key note** (the note that identifies the starting and ending pitch). Called a **scale**, this organization of tones is governed by a specific arrangement of whole steps and half steps, and each tone is numbered according to its position on the scale (1, 2, 3, etc.). The numbered position of each tone on the scale is called its **scale degree**.

Major Scales

Based on a pattern of whole steps and half steps producible on the white notes of the piano from C to the C above it, the **major scale** (example 2.2 below) continues to be the most important scale in Western music and the basis for the vast majority of musical theatre literature. Note that, in the major scale starting on C, half steps occur only between notes 3 and 4 and 7 and 8 (or 1 since the first and last pitch of a scale have the same letter name), the notes on the piano keyboard without black notes in between them. As illustrated in example 2.2 below, the pattern of whole steps and half steps in a major scale is two whole steps and a half step, three whole steps and a half step, or W-W-H-W-W-W-H.

W W H W W W H

Example 2.2

[Sound file 2.2]

Thousands of musical theatre songs have been composed using the major scale as the basis of melodic interest. As demonstrated in "Where or When" (example 2.1 above), Richard Rodgers was particularly fond of using scale passages melodically, a practice he continued in "Dancing on the Ceiling" (*Ever Green*), "My Romance" (*Jumbo*). "Spring Is Here" (*I Married an Angel*), "Have You Met Miss Jones?" (*I'd Rather Be Right*), "Glad to Be Unhappy" (*On Your*

Toes), "Stepsisters' Lament" (*Cinderella*), and "Younger Than Springtime" (*South Pacific*). Other composers who rely on the stepwise movement of the scale to create melodic interest include George M. Cohan, "Forty-Five Minutes from Broadway" (*Forty-Five Minutes from Broadway*); Fats Waller, "A Handful of Keys" (*Ain't Misbehavin'*); DeSylva, Brown, and Henderson, "The Girl of the Pi Beta Phi" (*Good News*); Noel Gay, "The Sun Has Got His Hat On" (*Me and My Girl*); Frank Loesser, "Lovelier Than Ever" (*Where's Charley?*); Albert Hague, "Young and Foolish" (*Plain and Fancy*); Jule Styne, "You'll Never Get Away from Me" (*Gypsy*); Harvey Schmidt, "Soon It's Gonna Rain" (*The Fantasticks*); and Andrew Lloyd Webber, "Seeing Is Believing" (*Aspects of Love*), to cite just a few examples. Irving Berlin's "There's No Business like Show Business" (*Annie Get Your Gun*) is, perhaps, the most familiar example of an *ascending* major scale melody (example 2.3).

Example 2.3
▶ [Sound file 2.3]

The melodic effectiveness of a *descending* major scale is demonstrated by Alan Menken's "If I Can't Love Her" (example 2.4 below) from *Beauty and the Beast*.

Example 2.4
▶ [Sound file 2.4]

A major scale can be created on any key note, using the system of whole and half steps based on the white-note major scale in C. However, building a major scale on any of the other white notes or black notes on the piano keyboard invariably involves the addition of sharps or flats (see example 2.5).

Example 2.5
▶ [Sound file 2.5]

Key Signatures

Note how the third, sixth, and seventh notes of the A major scale need to be sharped or raised one half step to maintain the proper pattern of whole steps and half steps while the first, fourth,

and eighth notes of the B \flat major scale need to be flattened or lowered one half step. Conveniently, the accidentals are collected into a system of sharps or flats called a **key signature** and placed immediately after the clef sign at the beginning of a composition. Starting with C major, the key signature chart below (example 2.6) provides a pattern, first, for sharp keys, then for flat keys. Note that key signatures never mix sharps and flats and that the **sharp keys are five ascending notes apart**, C-G-D-A, etc., while the **flat keys are five descending notes apart**, C-F-B \flat -E \flat etc.

Example 2.6 shows the C major scale in both treble and bass clefs. The notes are C, G, D, A, E, B, F \sharp , and C \sharp .

Example 2.6

41

Example 2.8 shows the F major scale in both treble and bass clefs. The notes are C, F, B \flat , E \flat , A \flat , D \flat , G \flat , and C \flat .

Please note that B and C \flat , F \sharp and G \flat , and C \sharp and D \flat are enharmonically the same.

Example 2.8

Identifying Major Scales

It is important to memorize the key signatures above so you can immediately recognize them when you are studying a piece of music. A close examination of key signatures reveals patterns that assist in their identification: the **names of the sharp keys can be determined by going one half step above the last sharp**. If the last sharp is C \sharp , for example, the name of the scale is D. The **flat keys can be determined by the name of the second-to-last flat in the series**. If the flats appear as B \flat , E \flat , A \flat , the key is E \flat . The one exception is the key of F which has only one flat, B \flat . Looking closely at the names of the sharps: F, C, G, D, A, E, B, we find that they are all five scale degrees apart and resemble the order of the scale names in example 2.6 above. Reading the sharps backward (or from right to left) we find the order of flats that governs the flat keys.

Exercise 1

In example 2.7 measures 1–9, write the major scales named over the staves without key signatures. For measures 10–18, write the appropriate major scales for the key signatures provided.

Example 2.7
(Continued)

Sight-Singing

In the first act of *The Sound of Music*, Maria gathers together the Trapp children and teaches them to sing while explaining the syllables of traditional **solfège** (a method of sight-singing). The song that Maria uses, “Do-Re-Mi” another of Richard Rodgers’s hits that has become part of the musical culture of the twentieth century, is in itself a lesson in sight-reading, evoking the exercises common to well-regarded sight-singing textbooks. Let us review the solfège syllables for those who may have forgotten (or perhaps never learned) the song:

Do	Re	Mi	Fa	Sol	La	Ti	Do
1	2	3	4	5	6	7	1

Example 2.8

Slowly sing the scale above, starting on the key note C (middle C on the piano) using the solfège syllables. Then sing the scale, replacing the solfège syllables with the numbers located under the notes. Because the numbers represent the actual **scale degrees** of the individual pitches, some contemporary musical theorists prefer the use of numbers to the traditional solfège syllables. Repeat the process with scales beginning on C#, D, E \flat , E, and F. When the scale tones are comfortably familiar to the students, move on to the ear-training exercise below.

Exercise 2

Slowly sing the following note patterns using numbers or the solfège syllables written beneath the pitches. Focus more on the distance between musical tones than the rhythm of the notes. Once the exercise has been completed and students are familiar with the tonal relationships, repeat the exercise, paying closer attention to the written rhythms. After successfully completing the sight-singing exercise, at the discretion of your instructor, play the note patterns on the piano.

Example 2.9

(Continued)

1 2 1 2 1 2 1 2 1 2 3 1 2 3 1 3 1 3 1 3 1 2
Do Re Do Re Do Re Do Re Do Re Mi Do Re Mi Do Mi Do Mi Do Mi Do Re

7
3 2 1 1 2 3 2 1 1 2 3 2 1 1 2 3 4 1 2 3 4
Mi Re Do Do Re Mi Re Do Do Re Mi Re Do Do Re Mi Fa Do Re Mi Fa

13
1 4 1 4 1 4 3 2 1 2 3 4 3 2 1 1 2 3 4 3 2 1
Do Fa Do Fa Do Fa Mi Re Do Re Mi Fa Mi Re Do Do Re Mi Fa Mi Re Do

19
1 2 3 4 5 4 5 4 3 2 1 2 3 4 5 4 5 4 3 2 1
Do Re Mi Fa Sol Fa Sol Fa Mi Re Do Re Mi Fa Sol Fa Sol Fa Mi Re Do

25
1 3 5 3 1 3 5 3 1 2 3 4 5 4 3 2 1 3 5 3 1 3 5 3
Do Mi Sol Mi Do Mi Sol Mi Do Re Mi Fa Sol Fa Mi Re Do Mi Sol Mi Do Mi Sol Mi

31
1 2 3 4 5 6 5 6 5 4 3 2 1 3 5 3 1 3 5 3
Do Re Mi Fa Sol La Sol La Sol Fa Mi Re Do Mi Sol Mi Do Mi Sol Mi

37
1 3 5 6 5 4 3 2 1 1 3 5 6 5 6 5 4 3 2 1
Do Mi Sol La Sol Fa Mi Re Do Do Mi Sol la Sol La Sol Fa Mi Re Do

43
1 2 3 4 5 6 7 7 6 7 6 5 4 3 2 1
Do Re Mi Fa Sol La Ti Ti La Ti La Sol Fa Mi Re Do

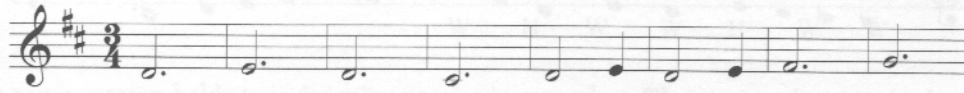
49
1 2 3 4 5 6 7 6 7 6 5 6 7 6 5 4 3 2 1 1 2 1 2
Do Re Mi Fa Sol La Ti La Ti La Sol La Ti La Sol Fa Mi Re Do Do Re Do Re

55
1 3 1 3 4 1 2 3 4 2 3 4 5 1 2 3 4 5 6 1 2 3 4
Do Mi Do Mi Fa Do Re Mi Fa Re Mi Fa Sol Do Re Mi Fa Sol La Do Re Mi Fa

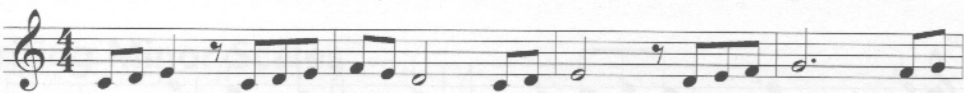
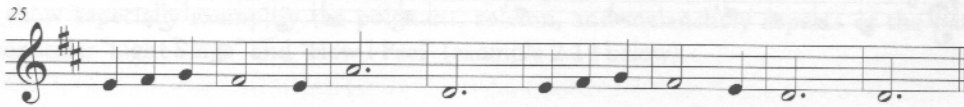
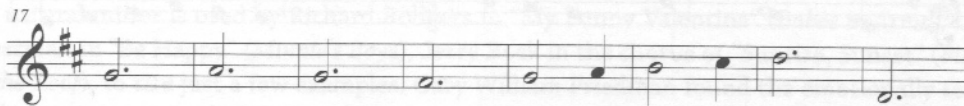
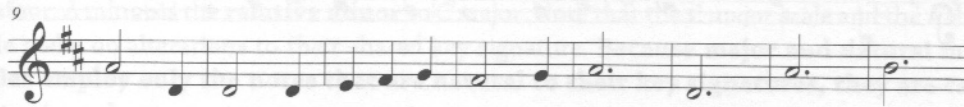
61
5 6 7 6 5 6 7 1 5 3 2 1 3 5 3 1
Sol La Ti La Sol La Ti Do Sol Mi Re Do Mi Sol Mi Do

Exercise 3

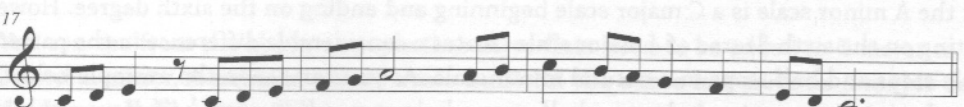
At the direction of your instructor, write the scale numbers or solfège syllables beneath the notes of the melodies in examples 2.10–2.12 below. Slowly clap the rhythms of the first melody then sing it by the numbers or solfège syllables. Repeat the process for the remaining melodies. At the discretion of your instructor, play the melodies below on the piano.



Example 2.10



Example 2.11



Names of Scale Degrees

In addition to its numerical placement in the scale, **each degree of the major and minor scales has a name and a function** that is described in example 2.17 below. The names and functions of scale degrees are highly important in the analysis and understanding of chord progressions, integral parts in the arrangement of the lead sheet in the second section of this book.

1	2	♭3	3	4	5	♭6	6	♭7	7	8(1)
T	S	M	S	D	S	S	L	T		
o	u	e	u	o	u	u	e	o		
n	p	d	b	m	b	b	a	n		
i	e	i	d	i	m	t	d	i		
c	r	a	o	n	e	o	i	c		
	t	n	m	a	d	n	n			
	n	t	i	n	i	i	g			
	i		n	t	a	c				
	c		a		n		T			
			n		t		o			
			t				n			
							e			

Example 2.17

We have already discussed the **tonic** (1), or **key note** of a scale. The **supertonic** (2) is simply the tone over the tonic, the way to approach the key note from above. The **mediant** (♭3 in minor or 3 in major) is a tone that is three notes above the tonic (C-D-E), midway between the tonic and the **dominant** (5). The **subdominant** (4) is five scale tones below the octave tonic. The **dominant** (5) is five scale tones above the tonic. Note that the tonic is equidistant between the subdominant and the dominant. The **submediant** (♭6 in minor or 6 in major) is three scale tones below the octave tonic (1) and midway between the octave tonic and the subdominant. Note that the tonic is equidistant between the submediant and mediant. The **subtonic** (♭7 in minor) is a whole step below the tonic. Note that the tonic is equidistant between the subtonic and supertonic. The **leading tone** (7) is one half step away from the tonic and a tone that seeks resolution to the tonic.

Exercise 4

Write down the major scales that belong to the key signatures on the staves below. On the same staff, next to the major scales, write the relative natural minor scales. Write the names of the scale degrees below each major and minor scale.

1

2

3

Example 2.18

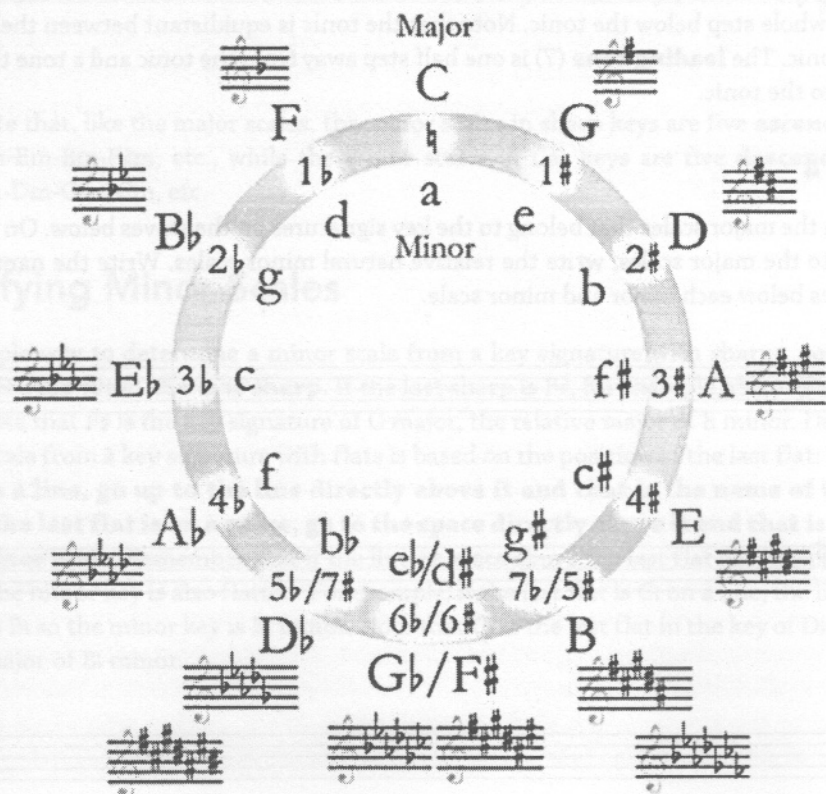
Example 2.18
(Continued)

Example 2.18 (Continued) consists of four musical staves. The first staff (labeled 4) is in treble clef with a key signature of one sharp (F#). The second staff (labeled 5) is in treble clef with a key signature of two flats (Bb, Eb). The third staff (labeled 6) is in bass clef with a key signature of three sharps (F#, C#, G#). The fourth staff (labeled 7) is in treble clef with a key signature of four flats (Bb, Eb, Ab, Db).

The Circle of Fifths

We have seen that all major and minor key signatures are based on ascending and descending scale degrees five notes apart. If the pattern is taken far enough, it returns to the original key. If we begin with C, for example, and move upward five scale degrees at a time, the pattern would go something like this: C-G-D-A-E-B (C₁)-F#(G₂)-C#(D₃)-A₄-E₅-B₆-F-C. This phenomenon is called the **circle of fifths** with the sharp keys moving clockwise and the flat keys moving counter-clockwise. Note that the names of major keys are represented outside the circle while the names of their relative minor keys are inside the circle.

Example 2.19



Often musical theatre composers choose not to pass through the entire circle of fifths to return to a starting tonality. Instead they employ a short cut, moving directly across the circle as in the progression: C–F–B \flat –E \flat –A–D–G–C. Even with the short cut, the pattern of falling fifths is maintained since A is five descending scale degrees away from E \flat .

In his 1962 musical *No Strings*, Richard Rodgers composed a number based on the circle of fifths called “Loads of Love.” Notice in example 2.20 how the bass line of the song proceeds in falling fifths to return to where it began. Notice, also, how the vocal melody on beat 3 of measures 1–3 replicates the fifth-driven bass line.

Example 2.20 shows a musical score for the song "Loads of Love" from the musical *No Strings*. It consists of two staves: a vocal melody in the treble clef and a bass line in the bass clef. The time signature is 4/4. The key signature has two flats (B-flat and E-flat). The lyrics are: "I nev-er have been hand-ed much, I nev-er have de-mand-ed much." The bass line moves in a series of falling fifths: C2, F1, B-flat1, E-flat1, A1, D1, G1, C2.

Example 2.20

[Sound file 2.8]

51

Another important example of the circle of fifths in musical theatre literature is Jerome Kern’s “All the Things You Are” from *Very Warm for May*. The bass line for Kern’s melody begins on F and wanders through falling fifths—B \flat –E \flat –A \flat –D \flat –G–C—before repeating the series starting on C. These falling fifth patterns are called **sequences** and are typically used to express an idea that is developing and only comes to a conclusion at the end of the sequence. In performance it often reflects the mental process of finding the right word, gathering the courage to speak a thought, or admitting to an emotion. Musically, the circle of fifths employs both major and minor tonalities in a forward-moving process that can be extremely effective dramatically (see Harmonic Movement in Unit 6 and Secondary Dominants in Unit 9).

The Harmonic Minor Scale

In Example 2.17 we noted the difference between the **subtonic** (the seventh scale degree in the natural minor scale) and the **leading tone** (the seventh scale degree of the major scale). Because the leading tone in a major scale is only one half step, the gravitational pull to the tonic note is quite strong. The resolution sounds and feels much more complete when 7–8 (1) is only a half step. As a result, composers of Western music interpolated the major scale leading tone into the natural minor scale and created what is called the **harmonic minor scale** (see example 2.21).

Example 2.21 shows the harmonic minor scale in G major. The scale is written in a treble clef with a one-sharp key signature (F#). The notes are G, A, B, C, D, E, F#, G. Below the notes are the interval labels: W, H, W, W, H, W+H, H.

Example 2.21

[Sound file 2.9]

Note that the only difference between the natural minor and harmonic minor is the raised seventh scale degree creating an exotic sounding distance of a whole step and a half between the sixth and seventh notes of the scale. Perhaps one of the most obvious uses of the harmonic minor in musical theatre literature was accomplished by Richard Adler and Jerry Ross in their 1954 hit, *The Pajama Game*, with the provocative and mysterious “Hernando’s Hideaway” (see example 2.22).

Example 2.22 shows a musical score for the song "Hernando's Hideaway" from the musical *The Pajama Game*. It consists of a single staff in the treble clef with a one-sharp key signature (F#). The lyrics are: "A glass of wine, A fast em-brace, It's called Her-nan-do'sHide-a-way! O-lay!"

Example 2.22

[Sound file 2.10]

Example 2.18
(Continued)

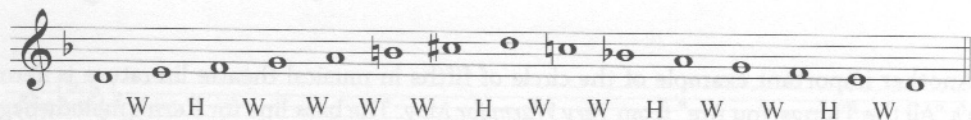
The repeated half steps in the melody, the separation of the lyric by rests creating a kind of breathless staccato, and the exotic raised seventh instilled in the number a kind of enigmatic atmosphere that proved to be exceptionally dramatic and successful in performance.

The Melodic Minor Scale

Because of the awkward interval between the sixth and seventh scale degrees, composers of Western music found the harmonic minor scale to be limiting melodically and urged the development of a **melodic minor scale** that raised both the sixth and seventh degrees of the natural minor scale and permitted an ascending stepwise melodic contour without the cumbersome leap of a step and a half. To preserve the characteristics of the minor scale and create a more successful descending pattern (remember that raising a tone typically signifies an ascending pattern), the melodic minor returned to the **natural minor** when descending. This resulted in a nine tone scale as shown in example 2.23.

Example 2.23

[Sound file 2.11]



With the melodic minor, composers enjoyed the potential of using the natural sixth and seventh along with the raised notes in the same piece. Although the scale was designed to raise the sixth and seventh on the ascent and lower them to their natural minor positions going down, musical theatre composers often tend to use the notes interchangeably, regardless of direction. Cole Porter's "Solomon" from *Nymph Errant*, for example, begins the melodic phrase with the raised sixth and seventh in D minor, ascending and descending, then leaps to the natural sixth before descending again (see example 2.24).

Example 2.24

[Sound file 2.12]

Porter's use of the melodic minor is intentionally exotic, a satirical approach to Eastern music befitting a song about King Solomon. Particularly interesting are measures two and three where the raised sixth is juxtaposed with the natural sixth, providing a bluesy nuance to the melodic phrase and a subtle comment on the lyric "contented lives."

Milton Schafer's "It's Your Fault" from the 1965 musical *Drat! The Cat!* employs E \flat melodic minor as the tonal center of an animated dispute, using both the natural and raised sixths and sevenths in parallel ascending phrases (see example 2.25).

Example 2.25

[Sound file 2.13]

Example 2.26

1 Melodic minor

2 Harmonic minor

3 Melodic minor

4 Harmonic minor

5 Melodic minor

6 Harmonic minor

7 Melodic minor

8 Harmonic minor

The Major-Minor Scale (Mode Mixture)

As the variations within the minor system drew it closer and closer to the major scale (the use of a device called the **Picardy third** even allowed music in a minor key to end with a major third rather than the lowered third common to all three minor scales), a composite **major-minor**, ten-note scale was developed with flexible thirds, sixths, and sevenths that clearly identified the key note or tonic, but also permitted it to move easily between major and minor systems (see example 2.27).

Example 2.27

[Sound file 2.14]

Because the composite major-minor scale is not a true scale (there can be no key signature for a scale that flats and naturals the same notes) many musical theorists prefer to call the easy flow between major and minor a **mode mixture** (mode is a synonym for scale and also refers to the mood of a composition or dramatic situation). **In a mode mixture, composers writing in a major key might borrow tones from the parallel minor key; similarly, composers working in a minor key might borrow tones from the parallel major.**

The 1956 musical starring Sammy Davis Jr., *Mr. Wonderful*, produced a major hit with “Too Close for Comfort,” a song by Jerry Bock, Larry Holofcener, and George Weiss, that took advantage of the easy flow between major and minor scales (see example 2.28).

She's too close for com - fort, Too close, Too
close for com - fort Please not a - gain.

Example 2.28

▶ Sound file 2.15

55

The A natural in bars 2 and 5, and B natural in measure 4 may be indicative of C melodic minor, especially with the B \flat in bars 5 and 6, but the use of an E natural in measure 1 and an E \flat in bars 3 and 4 demonstrates the presence of a mode mixture. By the end of the number, however, the melody falls into a pattern that grounds it securely in the key of C minor—the key governed by the key signature of the piece. Musical theatre composers like Stephen Sondheim, Leonard Bernstein, and Kurt Weill who often employ the major-minor mode mixture to add color and melodic interest to their compositions typically decide on a major or minor conclusion to their songs based on the key signature.

Modal Shifts

In musical theatre literature, the easy flow between major and minor is also present in songs that begin as minor but end as major, either in the relative major key, or in the parallel major, using the same key note as the minor. Jerome Kern’s “All the Things You Are” which was discussed above in relation to the circle of fifths is a fine example of a song beginning in minor and ending in its relative major. Richard Rodgers’s “The Sweetest Sounds” from *No Strings* and “My Funny Valentine” from *Babes in Arms*, Irving Berlin’s “Blue Skies” interpolated into Rodgers and Hart’s 1926 musical, *Betsy*, and Cole Porter’s “From This Moment On” from *Out of This World* and “So in Love” from *Kiss Me, Kate* are others. In each case, the melody journeys from minor to major to minor, finally resolving in the relative major key. Such **modal shifts** create subtle variations of mood and emotion creating a dynamic thrust in the music. See example 2.29 below, a portion of “My Favorite Things” from *The Sound of Music* that is obviously in the key of E minor.

Rain - drops on ro - ses and whis - kers on kit - tens,

Example 2.29

▶ [Sound file 2.16]

In example 2.30 below, we find the ending of the chorus of “My Favorite Things” obviously in the key of G major, with lyrics that announce a positive conclusion, reflecting the characters’ change of mood after thinking about their favorite things.

my fa - vor - ite things and then I don't feel _____ so bad!

Example 2.30

▶ [Sound file 2.17]

Examples of movement from minor to parallel major include Cole Porter's "I Love Paris" from *Can-Can*, Jerry Herman's "La Cage aux Folles" from the musical of the same name, and Bock and Harnick's "Far from the Home I Love" from *Fiddler on the Roof*. Porter sets the first section of "I Love Paris" (sixteen bars) in minor with a melody that is mirrored an octave higher in the parallel major in the second section (sixteen bars). The change from minor to major and the octave vocal leap is one of Porter's favorite devices to create an effective outpouring of emotion. The Herman and Bock and Harnick examples are especially interesting since the journey from minor to parallel major resolves in minor. The progression from minor to major invariably produces a kind of emotional uplift, a promise of hope, of resolution; the return to minor adds poignancy and uncertainty even to positive lyrics. During Christmas time in New York City, for example, when various charities are competing for donations, someone at the Red Cross had the brilliant idea of delivering its television message while "Jingle Bells" in a minor key was playing in the background. The campaign immediately touched the heart of the city and the Red Cross had a banner year. Music has the monumental power to move people, especially when music itself moves from major to minor and vice versa, as Cole Porter noted in his "Ev'ry Time We Say Goodbye" (*The Seven Lively Arts*). See example 2.31 below, "I Don Quixote," from Mitch Leigh and Joe Darion's *Man of La Mancha*, obviously in the key of D minor.

Example 2.31

▶ [Sound file 2.18]

Hear me now, oh thou bleak and un - bear - a - ble world,

The minor scale is clearly appropriate to the lyrics, "bleak and unbearable world," but when the character, with supreme bravado, announces himself and his qualifications ("destroyer of evil"), the key briefly changes to the parallel major (see example 2.32) with the addition of B \sharp , F \sharp , and C \sharp , tones that suggest the key of D major rather than the D minor of the key signature.

Example 2.32

▶ [Sound file 2.19]

Lord of La Man - cha, de - stroy - er of e - vil am I.

The key again changes to minor when he announces his intention "to conquer or die" and remains in minor even though Quixote promises to go onward to glory, implying, perhaps, a subtle insecurity or irresolution on his part. The change from major to minor suggests a dramatic difference between Quixote's statement of identity and his avowal of purpose.

Performing Major and Minor Scales

Performers typically determine the key note or tonic (do) of a piece from the key signature. We have seen, however, that a key signature provides us with two possibilities: a major key and a minor key. To determine whether the key signature is major or minor, look at the starting and ending notes of a song. If a key signature with one sharp begins and ends with G, the key is G major. If it begins and ends with E, the key is E minor. If the beginning and ending notes are different, typically the final note of the song will be the tonic of the key. When no key signature

is present, the key note can be determined by assembling the sharps or flats in a piece into a key signature and finding the final note of the song. If, for example, a song has F#, C#, and G# in its melody, and the final tone is A, then it is reasonable to assume that the key note is A, and that the song is in A major. If the piece has no sharps or flats and the final tone is A, then the key note is still A, but the key is A minor.

Exercise 6

Using either solfège syllables or numbers, practice singing the following major and minor scale patterns.

The image displays ten staves of musical notation for Exercise 6, all in the key of A major (one sharp, F#) and 4/4 time. The notation is as follows:

- Staff 1:** Ascending major scale: A4 (quarter), B4 (quarter), C5 (quarter), D5 (quarter), E5 (quarter), F#5 (quarter), G5 (quarter), A5 (quarter).
- Staff 2:** Descending major scale: A5 (quarter), G5 (quarter), F#5 (quarter), E5 (quarter), D5 (quarter), C5 (quarter), B4 (quarter), A4 (quarter).
- Staff 3:** Ascending minor scale: A4 (quarter), B4 (quarter), C5 (quarter), D5 (quarter), E5 (quarter), F5 (quarter), G5 (quarter), A5 (quarter).
- Staff 4:** Descending minor scale: A5 (quarter), G5 (quarter), F5 (quarter), E5 (quarter), D5 (quarter), C5 (quarter), B4 (quarter), A4 (quarter).
- Staff 5:** Ascending major scale: A4 (quarter), B4 (quarter), C5 (quarter), D5 (quarter), E5 (quarter), F#5 (quarter), G5 (quarter), A5 (quarter).
- Staff 6:** Descending major scale: A5 (quarter), G5 (quarter), F#5 (quarter), E5 (quarter), D5 (quarter), C5 (quarter), B4 (quarter), A4 (quarter).
- Staff 7:** Ascending minor scale: A4 (quarter), B4 (quarter), C5 (quarter), D5 (quarter), E5 (quarter), F5 (quarter), G5 (quarter), A5 (quarter).
- Staff 8:** Descending minor scale: A5 (quarter), G5 (quarter), F5 (quarter), E5 (quarter), D5 (quarter), C5 (quarter), B4 (quarter), A4 (quarter).
- Staff 9:** Ascending major scale: A4 (quarter), B4 (quarter), C5 (quarter), D5 (quarter), E5 (quarter), F#5 (quarter), G5 (quarter), A5 (quarter).
- Staff 10:** Descending major scale: A5 (quarter), G5 (quarter), F#5 (quarter), E5 (quarter), D5 (quarter), C5 (quarter), B4 (quarter), A4 (quarter).

Example 2.33

Example 2.34

Example 2.34 is a musical score in 4/4 time with a key signature of two flats (B-flat and E-flat). It consists of ten staves of music. The first staff begins with a treble clef, a 4/4 time signature, and a key signature of two flats. The melody consists of quarter notes and eighth notes. The second staff starts at measure 5. The third staff starts at measure 9. The fourth staff starts at measure 13. The fifth staff starts at measure 19. The sixth staff starts at measure 23. The seventh staff starts at measure 27. The eighth staff starts at measure 31. The ninth staff starts at measure 35. The tenth staff starts at measure 39 and features a more active eighth-note melody. The score concludes with a double bar line and repeat dots.

Example 2.35

Example 2.35 is a musical score in 4/4 time with a key signature of three flats (B-flat, E-flat, and A-flat). It consists of four staves of music. The first staff begins with a treble clef, a 4/4 time signature, and a key signature of three flats. The melody consists of quarter notes. The second staff starts at measure 5. The third staff starts at measure 9. The fourth staff starts at measure 13. The score concludes with a double bar line and repeat dots.

Example 2.35
(Continued)

Exercise 7

Determine the key and write the appropriate solfège syllables or numbers beneath the following major and minor examples. Slowly sing the examples using the solfège syllables or numbers. At the discretion of the instructor, play the examples on the piano. Example 2.36 is an excerpt of “Rocking in the Old Canoe” from *Dayton, Ohio*, a revue based on the lyrics of Paul Lawrence Dunbar. Example 2.37 is a portion of “The Player Piano” from the 1977 musical, *Louise*, loosely based on the life of Edith Piaf; note the change of key signature midway through the song. Examples 2.38, “Alas, Am I Then Forsaken,” and 2.39, “A Curse upon That Faithless Maid,” are selections from the 2008 musical fantasy, *Emperor of the Moon*.

Example 2.36

Example 2.36
(Continued)

Musical notation for Example 2.36 (Continued) in treble clef, key of D major. It consists of three staves of music. The first staff starts at measure 20 and ends with a whole note rest. The second staff starts at measure 25 and continues the melodic line. The third staff starts at measure 29 and concludes the example with a whole note rest.

Example 2.37

Musical notation for Example 2.37 in treble clef, key of B-flat major, 6/8 time signature. It consists of eight staves of music. The first staff starts at measure 1 and ends with a whole note rest. The second staff starts at measure 5. The third staff starts at measure 9. The fourth staff starts at measure 13. The fifth staff starts at measure 17 and ends with a whole note rest. The sixth staff starts at measure 22 and ends with a whole note rest. The seventh staff starts at measure 26 and concludes the example with a whole note rest.

Example 2.38 consists of five staves of musical notation in G major. The first staff (measures 1-4) shows a sequence of notes: G4 (quarter), A4 (quarter), B4 (quarter), C5 (quarter), B4-A4 (beamed eighth notes), G4 (quarter), F#4 (quarter), E4 (quarter), D4 (quarter), C4 (quarter), B3 (quarter), A3 (quarter), G3 (quarter). The second staff (measures 5-8) continues: G3 (quarter), F#3 (quarter), E3 (quarter), D3 (quarter), C3 (quarter), B2 (quarter), A2 (quarter), G2 (quarter). The third staff (measures 9-12) continues: G2 (quarter), A2 (quarter), B2 (quarter), C3 (quarter), D3 (quarter), E3 (quarter), F#3 (quarter), G3 (quarter). The fourth staff (measures 13-16) continues: G3 (quarter), A3 (quarter), B3 (quarter), C4 (quarter), D4 (quarter), E4 (quarter), F#4 (quarter), G4 (quarter). The fifth staff (measures 17-25) continues: A4 (quarter), B4 (quarter), C5 (quarter), B4-A4 (beamed eighth notes), G4 (quarter), F#4 (quarter), E4 (quarter), D4 (quarter), C4 (quarter), B3 (quarter), A3 (quarter), G3 (quarter), F#3 (quarter), E3 (quarter), D3 (quarter), C3 (quarter), B2 (quarter), A2 (quarter), G2 (quarter).

Example 2.38

Example 2.39 consists of three staves of musical notation in 4/4 time. The first staff (measures 1-4) shows a sequence of notes: G4 (quarter), A4 (quarter), B4 (quarter), C5 (quarter), B4-A4 (beamed eighth notes), G4 (quarter), F#4 (quarter), E4 (quarter), D4 (quarter), C4 (quarter), B3 (quarter), A3 (quarter), G3 (quarter), F#3 (quarter), E3 (quarter), D3 (quarter), C3 (quarter), B2 (quarter), A2 (quarter), G2 (quarter). The second staff (measures 5-8) continues: G2 (quarter), A2 (quarter), B2 (quarter), C3 (quarter), D3 (quarter), E3 (quarter), F#3 (quarter), G3 (quarter). The third staff (measures 9-12) continues: G3 (quarter), A3 (quarter), B3 (quarter), C4 (quarter), D4 (quarter), E4 (quarter), F#4 (quarter), G4 (quarter).

Example 2.39

This block shows a sequence of notes on a staff, likely a continuation or a specific part of Example 2.39. The notes are: G4 (quarter), A4 (quarter), B4 (quarter), C5 (quarter), B4-A4 (beamed eighth notes), G4 (quarter), F#4 (quarter), E4 (quarter), D4 (quarter), C4 (quarter), B3 (quarter), A3 (quarter), G3 (quarter), F#3 (quarter), E3 (quarter), D3 (quarter), C3 (quarter), B2 (quarter), A2 (quarter), G2 (quarter).

Example 2.39

4

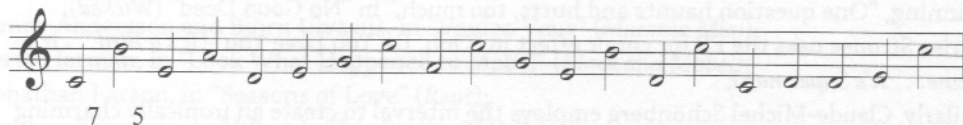
Intervals

The distance between two notes (or tones) is called an **interval**. Like all of Western music, the melodies and harmonies of musical theatre songs are made up of a series of intervals, and it is necessary to be able to identify and sing them correctly when performing musical theatre literature. In addition, the size and occurrence of intervals in musical theatre songs serve musical and dramatic functions; the ability to identify the way intervals affect mood and propel a melodic line is a useful tool for performers in the interpretation of lyrics and the discovery of the dramatic action of a number.

Intervals are both **quantitative** (a number measuring the distance between the notes, the size of the interval) and **qualitative** (a designation of “perfect,” “major,” “minor,” “diminished,” and “augmented”). To determine the quantitative name of an interval, simply count the letter names on the staff from the lower of the two notes in question to (and including) the higher. If the two notes were C and E, you would count C(1), D (2), E(3): the interval is 3 and called a **third**. If the notes were C and G, you would count C (1), D (2), E (3), F (4), G(5): the interval is 5 and called a **fifth**. **Cardinal numbers** are used in writing the size of an interval but **ordinal numbers** are used when speaking about them, except for 1 and 8, which have their own names: **unison (or prime)** and **octave**, respectively.

Exercise 1

Provide the quantitative number for the intervals in the example below. Remember to always start counting from the lowest note.



Example 4.1

After the numeric quantity of an interval is established, a quality must be assigned to each numeric value. It is not enough that we call an interval a third or fourth, we must determine what kind of a third or fourth it is. In the major scale, counting from the tonic or key note, all intervals are either **perfect** or **major**.

Perfect Intervals

Because they were historically regarded by music theorists as the most **consonant** (i.e., most stable and pleasing to the ear), the **prime** (unison), **fourth** (4), **fifth** (5), and **octave** (8) are called **perfect intervals**. Example 4.2 below displays the perfect intervals in the C major scale along with solfège syllables and sight-singing numbers. At the discretion of the instructor, sing along with example 4.2.

Example 4.2

▶ [Sound file 4.1]

Perfect Prime (PP or P1) Perfect 4th (P4) Perfect 5th (P5) Perfect Octave (P8)

Do Do Do Fa Do Sol Do Do
| | | 4 | 5 | 8 (1)

A repetition of pitches involving no half steps, the **perfect prime** interval (PP or P1), most commonly known for its ubiquitous use in Antonio Carlos Jobim's "One-Note Samba," has long been a staple of music theatre literature because of its consonant and emphatic reiteration of a single tone. Richard Rodgers, for example, uses the perfect prime effectively in "Eager Beaver" (*No Strings*), "Kansas City" (*Oklahoma!*) and "The Surrey with the Fringe on Top" (*Oklahoma!*), in which the perfect prime evokes the clip-clop of the horse's hooves as it draws the surrey along cobbled streets (example 4.3, below).

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Example 4.3

▶ [Sound file 4.2]

Chicks and geese and ducks bet-ter scur-ry, ___ When I take you out in the sur-ry, ___

Harvey Schmidt begins "All the Dearly Beloved" the opening number of *I Do! I Do!* with a melody full of PPs that evokes the tone of a religious ceremony; Stephen Sondheim employs the interval to portray nervous energy in "Another Hundred People" (*Company*), and "Everybody Says Don't" (*Anyone Can Whistle*). Many other musical theatre composers employ the interval to support or propel the dramatic event:

- Michael Gore portrays the libidinous urges of adolescents with hammer-like perfect primes in "Don't Waste the Moon" (*Carrie*);
- Andrew Lippa uses the interval as emphatic recitation in "Pulled," "When You're an Addams," "Morticia," and "In the Arms" (*The Addams Family*);
- Similarly, Elton John in "The Stars Look Down" (*Billy Elliot: The Musical*), Jonathan Larson in "Rent" (*Rent*), and Duncan Sheik in "Mama Who Bore Me" (*Spring Awakening*) use the interval to heighten the dramatic effect of the lyrics;
- Stephen Schwartz also employs the perfect prime for dramatic emphasis in the section beginning, "One question haunts and hurts, too much," in "No Good Deed" (*Wicked*);
- Charles Strouse uses the PP for comic effect in "Ooh, Do You Love You" (*It's a Bird... It's a Plane... It's Superman*);
- Similarly, Claude-Michel Schönberg employs the interval to create an ironically charming effect in "Master of the House" (*Les Misérables*);
- Burton Lane explores the subtle hypnotic quality of the PP in "One More Walk around the Garden" (*Carmelina*);
- Additionally, Bono and The Edge explore the edgy hypnotic aspect of the PP in "DIY World" and "Sinistereo" (*Spider-Man: Turn Off the Dark*);
- Trey Parker, Robert Lopez, and Matt Stone use the perfect prime to propel a revival-meeting atmosphere in "All-American Prophet" (*The Book of Mormon*);
- Andrew Lloyd Webber manages to provide a sense of mystery and perpetual motion through the use of PPs in the "Swish and swirl" section of "Masquerade" (*The Phantom of the Opera*).

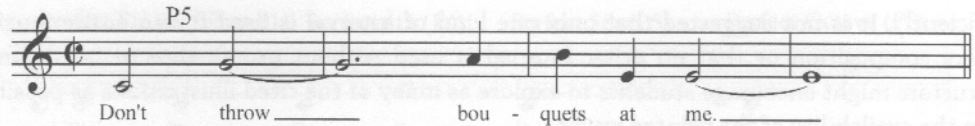
Note that the examples cited here and throughout this unit are designed to exemplify a "conspicuous" use of the interval under discussion as an aid to ear-training and sight-singing, to help the student easily identify specific intervals in musical theatre literature and sing them

proficiently. It is not suggested that only one kind of interval is used for an entire musical theatre composition or that no other interval is used without prominence or importance. Instructors might encourage students to explore as many of the cited illustrations as possible, given the availability of the printed music.

The **perfect fourth** (P4, a distance of five half steps) is a popular interval in musical theatre literature because of its **jovial, forward-moving** nature, evocative of a hunting call. Known popularly in “The Mexican Hat Dance,” and “The Wedding March” from Richard Wagner’s *Lohengrin*, the P4 is used prominently by Richard Rodgers in the opening phrase of the chorus of “Oklahoma!” (*Oklahoma!*); Charles Strouse employs it as the first two notes of the opening phrases of “You Can Be a New Yorker, Too” (*Mayor: The Musical*) and “Revenge” (*It’s a Bird . . . It’s a Plane . . . It’s Superman*); and Cole Porter reiterates the interval familiarly at the beginning of “Another Op’nin’, Another Show” to add excitement to the opening scene of *Kiss Me, Kate* (example 4.4, below).

Example 4.5

[Sound file 4.4]



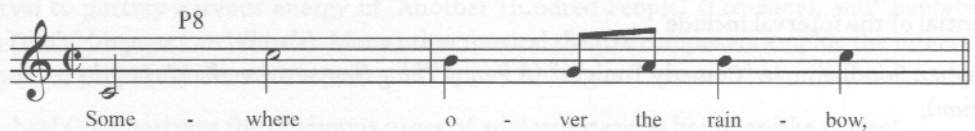
In musical theatre literature, the perfect fifth has been conspicuously employed by composers writing in a variety of musical styles. The list includes

- Stephen Schwartz, in “One Short Day” and “As Long as You’re Mine” (*Wicked*);
- Jule Styne, in “There Comes a Time” (*Look to the Lilies*);
- Richard Rodgers, in “My Favorite Things” (*The Sound of Music*);
- Jonathan Larson, in “Without You” (*Rent*);
- Duncan Sheik, in “My Junk” and “The Song of Purple Summer” (*Spring Awakening*);
- Jeanine Tesori, in “Make a Move” (*Shrek The Musical*);
- Bono and The Edge, in “Rise above 2” and “Turn Off the Dark” (*Spider-Man: Turn Off the Dark*);
- Andrew Lloyd Webber, in “Til I Hear You Sing” (*Love Never Dies*) and in “Angel of Music” (*The Phantom of the Opera*);
- Stephen Sondheim, in “Chrysanthemum Tea” (*Pacific Overtures*).

The **perfect octave** (P8, a distance of twelve half steps), popularized by the opening phrase of E. Y. Harburg and Harold Arlen’s “Over the Rainbow,” from *The Wizard of Oz* (example 4.6), has also found an actively dramatic function in contemporary musical theatre literature.

Example 4.6

[Sound file 4.5]



A **wide consonant leap**, the octave produces the musical dramatic effect of reaching out with the comfort and stability of tonal familiarity: the musical extension is not into an unfamiliar tonality but to the higher equivalent of the note leapt away from. The composers who have explored the dramatic potential of the perfect octave include

- Claude-Michel Schönberg, in “Bring Him Home” (*Les Misérables*);
- Elton John, in “Deep into the Ground” (*Billy Elliot: The Musical*);
- Elmer Bernstein, in “Put a Little Magic in Your Life” (*Merlin*);
- Mel Brooks, in “Springtime for Hitler” (*The Producers*);
- John Du Prez and Eric Idle, in “I’m All Alone” (*Spamalot*);
- Andrew Lloyd Webber, in “Our Kind of Love” (*A Beautiful Game*), and in the subsequent iteration of the melody as “Love Never Dies” (*Love Never Dies*).

Identifying the Qualitative Nature of Intervals

After the quantitative number of an interval has been established (i.e., counting up from the lower note) there are two methods of identifying the qualitative nature of intervals:

- **Count the number of half steps between the notes.** Our discussion of each interval specifies the number of half steps specific to that interval. If, for example, the number of the interval is 4 and you count five half steps, then the interval is a P4. If you count fewer or more half steps between the notes, the interval is still a fourth but not perfect.

- A second method is often preferred by many musical theorists. We said at the beginning of this unit that in a major scale, all the intervals counting from the tonic are either perfect or major. This method involves our always thinking of the lower note of an interval as the tonic of a major scale. **If the upper note would naturally appear in the scale of which the lower note is the tonic, then the interval is either perfect or major.** For example, if the lower note is F and the top note is B^b, we know immediately that the interval is a perfect fourth since the F scale has a B^b as the fourth scale degree. Note, also, that the lower note may not be the tonic of the scale (or key) the song is written in; in which case you would need to imagine that the lower note is the tonic of a new scale. For example, if the song is written in the key of F but the interval is from C (lower note) to G, in identifying that interval we need to imagine that C is the tonic of a major scale and that the interval is a P5 since G occurs naturally in the C major scale. If the lower note happens to be a note for which there is no scale (for example, the interval A[#]-E[#]), determine what the interval would be without the sharps (A-E), then reinstate the sharps. A-E is a P5 since E is the natural fifth in the key of A major. Since both notes are sharpened, the relationship between the notes remains the same and the answer is P5.

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Exercise 2

Using either method described above, identify the perfect intervals beneath the notes of the following musical example.

Example 4.7

Once you have identified all the perfect intervals, slowly sing the example using solfège syllables or numbers. Afterward, at the instructor's discretion, play the example on the piano.

Major Intervals

In a major scale, counting from the tonic, all seconds, thirds, sixths, and sevenths are major (see example 4.8). At the discretion of the instructor, sing along with the example below.

Example 4.8

[Sound file 4.6]

Musical notation for Example 4.8. The staff shows a sequence of notes: Do, Re, Do, Mi, Do, La, Do, Ti. Above the staff, intervals are labeled: M2 between Do and Re, M3 between Re and Do, M6 between Do and La, and M7 between Do and Ti. Below the staff, the notes are labeled with their solfège names and fingerings: Do (1), Re (2), Do (1), Mi (3), Do (1), La (6), Do (1), Ti (7).

The **major second** (M2, a distance of two half steps, or one whole step) represents adjacent notes on a scale and is a common connective interval in musical theatre literature, featured prominently (in combination with perfect primes) by Richard Rodgers, in “It Might as Well Be Spring” (*State Fair*), example 4.9.

Example 4.9

[Sound file 4.7]

Musical notation for Example 4.9. The staff shows a sequence of notes: I, m, a, s, r, e, s, t, l, e, s, s, a, s, a, w, i, l, l, o, w, i, n, a, w, i, n, d, s, t, o, r, m. An interval of M2 is labeled above the staff between the notes 's' and 't' in 'rest-less'.

Many other significant musical theatre composers employ the M2 conspicuously in their work:

- Jule Styne, in “People” (*Funny Girl*);
- Mark Sandrich Jr., in “I Invented Myself” (*Ben Franklin in Paris*);
- Charles Strouse, in “Everybody Wants to Do a Musical” (*Nick and Nora*);
- Benny Andersson and Björn Ulvaeus, in “Pity the Child” (*Chess*) and “Mamma Mia!” (*Mamma Mia!*);
- Jonathan Larson, in “One Song Glory” (*Rent*);
- Michael Gore, in “Unsuspecting Hearts” (*Carrie*);
- Stephen Schwartz, in “No One Mourns the Wicked” (*Wicked*);
- Alan Menken, in “Her Voice,” and “Kiss the Girl” (*The Little Mermaid*);
- Duncan Sheik, in “All That’s Known” (*Spring Awakening*);
- Elton John, in “Solidarity” (*Billy Elliot: The Musical*);
- Claude-Michel Schönberg, in “At the End of the Day” and “A Heart Full of Love” (*Les Misérables*);
- Andrew Lloyd Webber, in “All I Ask of You” (*The Phantom of the Opera*);
- Mel Brooks, in “That Face” (*The Producers*);
- Jeanine Tesori, in “Story of My Life” (*Shrek The Musical*);
- John Du Prez and Eric Idle, in “Run Away!” (*Spamalot*);
- Bono and The Edge, in “Bouncing Off the Walls” (*Spider-Man: Turn Off the Dark*).

The **major third** (M3, a distance of four half steps, or two whole steps) is an easy, consonant leap displayed effectively by Richard Rodgers, in “Do-Re-Mi” (*The Sound of Music*) in the phrase “deer, a female deer” (example 4.10).

Example 4.10

[Sound file 4.8]

Musical notation for Example 4.10. The staff shows a sequence of notes: D, o, c, a, d, e, e, r, a, f, e, m, a, l, e, d, e, e, r. An interval of M3 is labeled above the staff between the notes 'a' and 'd' in 'a deer'.

Musical theatre literature offers a great number of examples of the **jovial, positive, and assuring character of the major third**. Composers who have made much of the interval’s dramatic potential include

- Cy Coleman, in “Come Follow the Band” and “The Colors of My Life” (*Barnum*);
- Jonathan Larson, in “I’ll Cover You” (*Rent*);

- John Kander, in “All That Jazz” (*Chicago*);
- Harvey Schmidt, in “What Is a Woman?” (*I Do! I Do!*);
- Richard Rodgers, in “If I Loved You” (*Carousel*);
- Stephen Sondheim, in “There Won’t Be Trumpets” (*Anyone Can Whistle*);
- Andrew Lloyd Webbers, in “Prima Donna” (*The Phantom of the Opera*).

The **major sixth** (M6, a distance of nine half steps), commonly associated with the opening phrase of “My Bonnie Lies over the Ocean” or the old NBC call sign, is a **large consonant leap** that appears in the opening phrase of “Music of the Night” from *The Phantom of the Opera* (example 4.11). Note how the intervals descend as the melody progresses, as if the singer is pulling the listener closer as the melody unfolds.

Musical notation for Example 4.11. The melody is in G major (one sharp) and 4/4 time. The first interval is a major sixth (M6) between G4 and E5. The second interval is a perfect fifth (P5) between E5 and A4. The third interval is a perfect fourth (P4) between A4 and F#4. The lyrics are: "Night time sharp - ens, height - ens each sen - sa - tion;"

Example 4.11

[Sound file 4.9]

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The interval of a major sixth is a musical leap sufficiently large and consonant to suggest a dramatic extension or grasping that is within the reach of the character. It can create dramatic tension and/or emphasis, assist in a change of focus, or express the range of a character’s objective. The musical theatre composers who have explored the many theatrical uses of the major sixth include

- Charlie Smalls, in “If You Believe” (*The Wiz*);
- Richard Rodgers, in “What’s the Use of Wond’rin’” (*Carousel*);
- Stephen Sondheim, in “Everybody Says Don’t” (*Anyone Can Whistle*);
- Jerry Herman, in “I’ll Be Here Tomorrow” (*The Grand Tour*);
- Mel Brooks, in “Along Came Bialy” and “I Want to Be a Producer” (*The Producers*);
- Claude-Michel Schönberg, in “A Little Fall of Rain” (*Les Misérables*);
- Mark Sandrich Jr., in “You’re in Paris” and “When I Dance with the Person I Love” (*Ben Franklin in Paris*).

The **major seventh** (M7, a distance of eleven half steps) is a large **dissonant** (unpleasant-sounding) leap that is useful in **creating and communicating dramatic tension**. Although musical theatre composers tend to use it sparingly, Stephen Sondheim employed the interval for great theatrical effect in “Anyone Can Whistle” (*Anyone Can Whistle*), and at the end of the melody line in “The Road You Didn’t Take” (*Follies*). Marvin Hamlisch used the interval satirically in the phrase, “I’ll apply the Sondheimlich maneuver” in “Paula (An Improvised Love Song)” in *The Goodbye Girl* and seriously to express the tension in the line “to feel the motion” in “Nothing” (*A Chorus Line*). Similarly, Duncan Sheik used the interval to add tension to “The Mirror-Blue Night” in *Spring Awakening*.

Stephen Schwartz’s use of the M7 is especially effective dramatically at the beginning of “Gifts of Love” from *The Baker’s Wife* (example 4.12).

Musical notation for Example 4.12. The melody is in B-flat major (two flats) and 4/4 time. The first interval is a major seventh (M7) between B-flat4 and A4. The second interval is a minor seventh ((m7)) between A4 and G4. The lyrics are: "A fresh picked rose be - side my bed,"

Example 4.12

[Sound file 4.10]

Note the presence of two seventh intervals in example 4.12. The seventh in the first measure is an M7 while the seventh leap in measures 3–4 (with only 10 half steps) is called a minor seventh (m7), an interval discussed below. Listen to example 4.12 again and try to hear the difference

between the M7 and m7. Note how the presence of two musical leaps of a seventh adds tension to the simple lyric.

Exercise 3

Following the instructions for the two methods of recognizing intervals, identify the M2s, M3s, M6s, and M7s beneath the notes in the following example. Remember, if you employ the major scale method, all the upper tones must fit naturally within the scale of the lower note to qualify as major intervals. If the lower note of an interval happens to be a tone for which there is no scale (for example, the interval A \sharp -B \sharp) cancel both sharps and analyze the interval as A-B. Since B is the second scale degree in the scale of A major, we know that A-B is an M2. Since both notes are sharped in the original interval, the relationship between the notes remains the same and the answer is M2.

Example 4.13

Once you have identified all the major intervals, slowly sing the example using solfège syllables or numbers. Afterward, at the instructor's discretion, play the example on the piano.

Minor Intervals

All major intervals become minor when the distance between the two tones is **shortened by one half step**. Major intervals are indicated by "M," minor intervals by the lower case "m." At the discretion of the instructor, sing along with example 4.14 below.

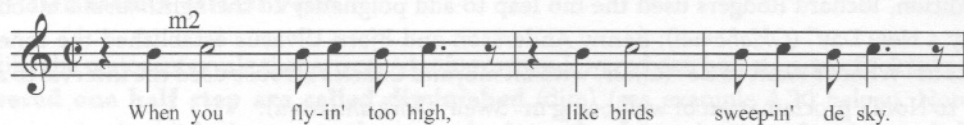
Example 4.14



	M2	m2	M3	m3	M6	m6	M7	m7
	Do Re	Do Ra	Do Mi	Do Me	Do La	Do Le	Do Ti	Do Te
	1 2	1 \flat 2	1 3	1 \flat 3	1 6	1 \flat 6	1 7	1 \flat 7

The **minor second** (m2, a distance of one half step) is a common interval in musical theatre songs because the half-step distance between tones provides a dramatically effective tension-resolution dynamic (evocative of the relationship between leading tone and tonic in the

major scale) that can sound **sinister, mysterious, or jovial**. Popularized by John Williams as the shark's theme in *Jaws*, the m2 is featured in Harold Arlen's "Two Ladies in de Shade of de Banana Tree" from *House of Flowers* (example 4.15). Note how the inherent proximity of the tones creates a dynamic setting of the lyrics with tension and resolution in each repetition of the interval.



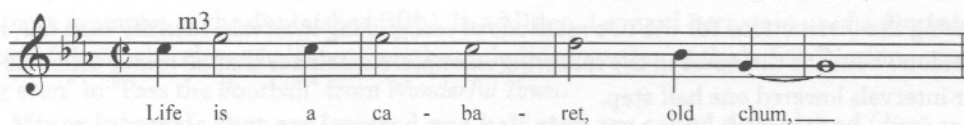
Example 4.15

[Sound file 4.12]

Other musical theatre composers who have employed the m2 effectively include

- Richard Adler and Jerry Ross, in "Hernando's Hideaway" (*The Pajama Game*);
- Andrew Lloyd Webber, in "Think of Me" (*The Phantom of the Opera*), "The Beauty Underneath," and "Heaven by the Sea" (*Love Never Dies*);
- Jule Styne, in "Just in Time" (*Bells Are Ringing*), and "Everything's Coming Up Roses" (*Gypsy*);
- Harvey Schmidt, in "The Honeymoon Is Over" (*I Do! I Do!*);
- Jonathan Larson, in "Rent" (*Rent*);
- Benny Andersson and Björn Ulvaeus, in "Thank You for the Music," and "Money, Money, Money" (*Mamma Mia!*);
- Mel Brooks, in "Til Him" (*The Producers*);
- Bono and The Edge, in "Picture This" (*Spider-Man: Turn Off the Dark*);
- John Du Prez and Eric Idle, in "The Song That Goes like This" (*Spamalot*).

The **minor third** (m3, a distance of three half steps), popularized in the children's ditty, "This Old Man" ("paddywack, give a dog a bone"), was the interval chosen by Vincent Youmans for "I Want to Be Happy" in *No, No, Nanette*. Jerry Herman used the m3 liberally throughout "Marianne" in *The Grand Tour*, as did Charles Strouse, in "You've Got Possibilities" (*It's a Bird . . . It's a Plane . . . It's Superman*), and John Kander chose to set the lyric, "Life is a cabaret, old chum," with an m3 in *Cabaret* (example 4.16).



Example 4.16

[Sound file 4.13]

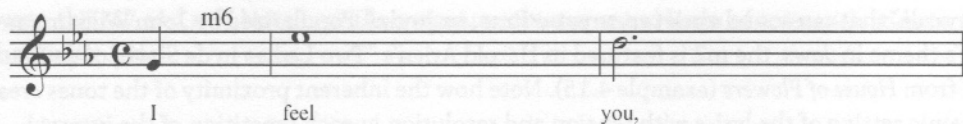
The m3 is consonant though somewhat darker than an M3. Dramatically, the interval appears **less resolved or final** than its major counterpart and is often used to evoke tension, unfulfilled promise or desire, and/or feelings of longing. Other musical theatre composers have also explored the dramatic potential of the m3:

- Jonathan Larson, in "Take Me or Leave Me" (*Rent*);
- Duncan Sheik, in "The Bitch of Living" and "And Then There Were None" (*Spring Awakening*);
- Benny Andersson and Björn Ulvaeus, in "Gimme! Gimme! Gimme!" (*Mamma Mia!*);
- Trey Parker, Robert Lopez, and Matt Stone, in "Hello!" (*The Book of Mormon*);
- Harvey Schmidt, in "Nobody's Perfect" (*I Do! I Do!*);
- Bono and The Edge, in "No More" (*Spider-Man: Turn Off the Dark*).

The **minor sixth** (m6, a distance of eight half steps) is a **consonant leap** used by Jerry Bock at the beginning of "Dear Friend" (*She Loves Me*), and by Stephen Sondheim as the first two notes of "Johanna" (*Sweeney Todd*), example 4.17. In both cases, the m6 is used to express an emotional reaching out, adding pathos to the dramatic event.

Example 4.17

[Sound file 4.14]

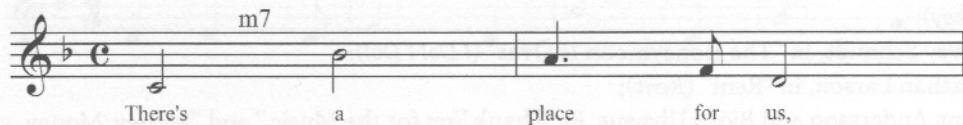


In addition, Richard Rodgers used the m6 leap to add poignancy to the lighthearted mood in “Many a New Day” (*Oklahoma!*); Benny Andersson and Björn Ulvaeus established the tone of pathos in “Where I Want to Be” (*Chess*) with an m6; and Charles Strouse used the interval to add irony to Nora’s proclamation of well-being in “Swell” (*Nick and Nora*).

The **minor seventh** (m7, a distance of ten half steps) is a common “blues” interval in music, popular in musical theatre because it is always **moving forward toward an anticipated resolution**, typically a half step lower on the sixth degree of the scale. When the expected resolution fails to occur, the listener is left suspended in anticipation of further movement. As a result, with and without resolution, the interval is a source of dramatic tension and interest. Leonard Bernstein, for example, used an ascending m7 at the beginning of “Somewhere” in *West Side Story* (example 4.18) to portray the characters’ longing for a better existence.

Example 4.18

[Sound file 4.15]



Similarly, Andrew Lloyd Webber dramatically employed the ascending leap in “Look with Your Heart” in *Love Never Dies*.

The emotional effectiveness of the descending m7 was explored by Richard Rodgers, who launched the chorus of “Something Wonderful” in *The King and I* with a falling m7 leap; Stephen Sondheim, who dramatically articulated the word “whistle” in “Anyone Can Whistle” with a falling m7; and Benny Andersson and Björn Ulvaeus, who introduced the chorus of “The Winner Takes It All” (*Mamma Mia!*) with the descending interval.

Exercise 4

Following the instructions for the two methods of recognizing intervals, identify each m2, m3, m6, and m7 beneath the notes in the following example. Remember that all minor intervals are major intervals lowered one half step.

Example 4.19



Once you have identified all the minor intervals, slowly sing the example using solfège syllables or numbers if necessary. Afterward, at the instructor's discretion, play the example on the piano.

Diminished Intervals

Unlike the major intervals that are called minor when lowered one half step, **perfect intervals lowered one half step are called diminished** (dim) (see example 4.20 below). Note the absence of a diminished prime in the example. Since the determination of an interval always begins with the lowest note, a prime cannot be less than itself. Hypothetically, a diminished prime would be C–C \flat ; but if our determination of the size and quality of an interval must always begin with the lower note, the interval in question is actually C \flat –C, larger, not smaller, and therefore not diminished. At the instructor's discretion, sing along with example 4.20.

P4 dim4 P5 dim5 P8 dim8
 Do Fa Do Fe Do Sol Do Se Do Do Do De
 1 4 1 ♭4 1 5 1 ♭5 1 8(1) 1 ♭8

Example 4.20

[Sound file 4.16]

85

With the exception of the diminished fifth—a tritone comprised of six half steps that will be discussed below—the diminished perfect intervals are seldom used in musical theatre literature. However, there are a few examples. The lines, “Pris’ners of love, our turtle doves” in Mel Brooks’s “Prisoners of Love” (*The Producers*) provide an example of a **diminished fourth** (dim4, with four half steps). Similarly, the lines “lovers possessions” and “Back where I started” in Benny Andersson and Björn Ulvaeus’s “Where I Want to Be” (*Chess*) are written as diminished fourths. Stephen Sondheim composed the phrase, “This is the land of opportunity” in “The Ballad of Guiteau” (*Assassins*) with a **diminished fifth** (dim5, with six half steps) on the underlined portion of the word, “opportunity”; and Stephen Schwartz made use of the dim5 on the lyrics, “Turn back” in “Turn Back, O Man” from *Godspell* (see **augmented fourth** below for more examples of the diminished fifth). In addition, Leonard Bernstein used a **diminished octave** (dim8, with eleven half steps) on the underlined portion of the lyrics, “Nothing you have ever seen” in “Pass the Football” from *Wonderful Town*.

Minor intervals that are lowered one half step are called diminished (dim) as well. **Diminished seconds** have a distance of no half steps and thus sound like perfect primes; **diminished thirds** have a distance of two half steps and thus sound like major seconds; **diminished sixths** have seven half steps and thus sound like perfect fifths; **diminished sevenths** have nine half steps and thus sound like major sixths (see example 21 below). Remember, notes that sound the same but are written differently are called **enharmonic**. Solfège syllables and sight-singing numbers are provided for both the double-flatted notes and their enharmonic equivalents. At the discretion of the instructor, sing along with the example below.

m2 dim2 = PP m3 dim3 = M2
 Do Ra Do Raf Do Do Do Me Do Mef Do Re
 1 ♭2 1 ♭♭2 1 1 1 ♭3 1 ♭♭3 1 2

5
 m6 dim6 = P5 m7 dim7 = M6
 Do Le Do Lef Do Sol Do Te Do Tef Do La
 1 ♭6 1 ♭♭6 1 5 1 ♭7 1 ♭♭7 1 6

Example 4.21

[Sound file 4.17]

Example 4.17
[Sound file 4.17]

Because the double-flatted notes are equivalent to a lower scale degree (D double-flat is C, E double-flat is D, A double-flat is G, B double-flat is A), these diminished intervals are rarely used in theatrical music, except in passages with chromatic melodies where enharmonic spellings might be misleading.

Augmented Intervals

When perfect and major intervals are raised one half step (one half-step), they are called **augmented** (aug). At the discretion of the instructor, sing along with example 4.22 below.

Example 4.22
[Sound file 4.18]

Example 4.22 shows two staves of musical notation in treble clef, illustrating augmented intervals. The first staff contains intervals from PP to aug4, and the second staff contains intervals from P5 to aug8. Each interval is written on a staff with a note on a line and a note on a space. Below each interval, the solfège syllables and scale degrees are provided. The intervals are: PP (Do Do), augP (Do Di), M2 (Do Re), aug2 (Do Ri), M3 (Do Mi), aug3 (Do Ma), P4 (Do Fa), aug4 (Do Fi), P5 (Do Sol), aug5 (Do Si), M6 (Do La), aug6 (Do Li), M7 (Do Ti), aug7 (Do To), P8 (Do Do), and aug8 (Do Di).

When singing augmented intervals, one finds that they sound exactly the same as many of the intervals we have already seen. For example, **augmented prime** (augP, a distance of one half step) sounds like a minor 2; an **augmented second** (aug2, a distance of three half steps) sounds like a minor third; an **augmented fifth** (aug5, a distance of 8 half steps) sounds like a minor sixth. The reason that these intervals sound alike is that they share the same number of half steps. Example 4.23 demonstrates the similarities between intervals. At the discretion of the instructor, sing along with the example below.

Example 4.23
[Sound file 4.19]

Example 4.23 shows three staves of musical notation in treble clef, illustrating equivalent intervals. Each interval is written on a staff with a note on a line and a note on a space. Above each interval, the interval name and the number of half steps are given. Below each interval, the solfège syllables and scale degrees are provided. The intervals are: augP (1 half step) = m2 (1 half step), aug2 (3 half steps) = m3 (3 half steps), aug3 (5 half steps) = P4 (5 half steps), aug4 (6 half steps) = dim 5 (6 half steps), aug5 (8 half steps) = m6 (8 half steps), aug6 (10 half steps) = m7 (10 half steps), and aug7 (12 half steps) = P8 (12 half steps).

Although intervals may have the same number of half steps and sound alike, remember that the written notes determine their numerical coefficient. Any note relating to itself, for example, even if sharped or flatted will be some kind of prime (or 1). It is important in ear-training

to learn which intervals on paper sound the same to help in sight-singing musical theatre literature.

Augmented intervals appear in musical theatre literature with varying degrees of frequency: the **augmented seconds**, **augmented thirds**, and **augmented sevenths** are hardly used at all while the **augmented prime** and **augmented fourth** have become popular musical-dramatic tools of the theatre composer. With its ascending chromatic motion propelling both melody and lyric forward, the **augmented prime** is conspicuously present in Jerry Bock's "Gentleman Jimmy" (*Fiorello!*), Richard Rodgers's "Sunday" (*Flower Drum Song*), Jule Styne's "Sadie, Sadie" (*Funny Girl*), and Stephen Sondheim's "Broadway Baby" and "Waiting for the Girls Upstairs" (*Follies*) to cite just a few examples.

The Tritone

Also known as a **diminished fifth** or an **augmented fourth**, the **tritone** (TT, or "Devil's Interval"), consisting of six half steps, is a very prominent enharmonic interval in musical theatre literature. Music theorists in the Middle Ages considered the tritone the most dissonant of intervals since it was unstable and absolutely required resolution: the aug4 up to the fifth degree of the scale, the dim5 down to the fourth. Because it is an interval of tension demanding resolution, the tritone found ample usage in musical theatre literature, particularly throughout *West Side Story*, most conspicuously in "Cool," and "Maria" where it is represented as an augmented fourth (example 4.24 below).

The image shows a musical staff in G major with a treble clef and a common time signature. The melody consists of the following notes: G4 (quarter), A4 (quarter), B4 (quarter), C5 (quarter), B4 (quarter), A4 (quarter), G4 (quarter). Above the first two notes, G4 and A4, is the label 'aug 4'. Above the last two notes, B4 and C5, are two triplet markings, each consisting of a bracket with the number '3' above it. Below the staff, the lyrics are: 'Ma - ri - a I just met a girl named Ma - ri - a,'.

Example 4.24

[Sound file 4.20]

Other theatre composers who took advantage of the tension/release potential of the tritone include

- Jonathan Larson, in "Take Me or Leave Me" (*Rent*);
- Benny Andersson and Björn Ulvaeus, in "Gimme! Gimme! Gimme!" (*Mamma Mia!*);
- Marvin Hamlisch, in "What I Did for Love" (*A Chorus Line*);
- Mitch Leigh, in "Girls Ahoy!" (*Ain't Broadway Grand*);
- Jerry Herman, in "La Cage Aux Folles" (*La Cage Aux Folles*);
- Charles Strouse, in "Dancing with the Fools" (*Rags*);
- Andrew Lloyd Webber, in the heated confrontational duet between Raoul and the Phantom, "Devil Take the Hindmost" (*Love Never Dies*).

Exercise 5

Following the instructions for the two methods of recognizing intervals, write the names of each of the intervals in examples 4.25 and 4.26 beneath the notes. Remember, if the lower note of an interval happens to be a tone for which there is no scale (for example, the interval A \sharp -G), cancel the sharp and analyze the interval as A-G. Since G \sharp is the seventh scale degree in the scale of A major, we know that A-G is an m7. Reinstating the A \sharp reduces the interval by one half step, and minor intervals decreased by a half step are called diminished. The interval A \sharp -G is a dim7.

Example 4.25

Note the incomplete measure at the end of example 4.25. Remember that when songs begin with pickup notes, it is a common practice to leave out of the final measure the same number of beats that the pickup notes contained so that together they would total a complete measure (see Pickup Measures in Unit 1).

Example 4.26

Example 4.26 (Continued) consists of three staves of music in G major (one sharp). The first staff starts at measure 7 and contains three triplet groups of eighth notes. The second staff starts at measure 10 and contains two triplet groups. The third staff starts at measure 13 and contains two triplet groups. The notes in the triplets are: Staff 1: G4, A4, B4; Staff 2: C5, B4, A4; Staff 3: G4, F4, E4.

Example 4.26
(Continued)

Once you have identified all the intervals, slowly sing the example using solfège syllables or numbers. Afterward, at the instructor's discretion, play the example on the piano.

89

Harmonic Intervals

The intervals under discussion thus far have been in a **horizontal** position, that is, positioned one after the other on the staff. This kind of interval is called a **melodic interval** because it supplies the raw material for musical melodies. Intervals that are in a **vertical** position, that is, positioned one on top of the other on the staff, are called **harmonic intervals** because they provide the raw material for harmony. The rules that apply to melodic intervals regarding the naming of intervals also apply to harmonic intervals. A major third melodically, for example, is the same major third when written harmonically.

Exercise 6

On the lines provided, identify the harmonic intervals in the example below.

Exercise 6 consists of two staves of music. The first staff has a treble clef and a key signature of one sharp (F#). It contains seven pairs of notes: (G4, B4), (A4, C5), (B4, D5), (C5, E5), (D5, F#5), (E5, G5), and (F#5, A5). The second staff has a bass clef and a key signature of one sharp (F#). It contains seven pairs of notes: (F#3, A3), (G3, B3), (A3, C4), (B3, D4), (C4, E4), (D4, F#4), and (E4, G4).

Example 4.27

At the discretion of the instructor, play the exercise on the piano when you have completed the identification of the harmonic intervals.

Exercise 7

Write the names of the harmonic intervals below the notes in the following two examples. The first example, "Don't Waste the Moon," is derived from the 1988 version of *Carrie*, with music

by Michael Gore and lyrics by Dean Pitchford. The second, "Gun Song," is from the 1991 musical *Assassins*, with music and lyrics by Stephen Sondheim.

Example 4.28



Example 4.29



After you have labeled all of the intervals, slowly sing each example on "Ah." Use solfège syllables or sight-singing numbers only if necessary. At the instructor's discretion, play the examples on the piano.

Inversions of Intervals

Intervals can be **inverted** by placing the lower note an octave higher (or the higher note an octave lower). Thus, a second becomes a seventh, a third becomes a sixth, and so forth, according to the following formula: **subtract the number of the interval from 9 and the result is the number of the inversion**. Perfect intervals remain perfect, major intervals become minor, minor intervals become major, augmented intervals become diminished, and diminished intervals become augmented (see example 4.30 below).

Example 4.30
 [Sound file 4.21]

M2 m7 M3 m6 P4 P5 P5 P4 M6 m3

6
 M7 m2 aug4 dim5 dim5 aug4 dim2 aug7 aug2 dim7

Exercise 8

The knowledge of intervallic inversions is important to the creation of vocal harmonization in musical theatre works. In example 4.31, name the written melodic intervals below the staff and supply the names and notes of their inversions. For example, if the original interval is a major third, C-E, write M3 under the notes on the staff; then write the inversion, E-C, in the space provided on the staff, and identify the interval as m6 below the notes. Sing each original interval as well as the inversion you provide. At the instructor's discretion, play the exercise on the piano.

Example 4.31 consists of three staves of musical notation in treble clef. The first staff contains measures 1-4, the second staff contains measures 5-8, and the third staff contains measures 9-12. The music features various intervals, including major and minor seconds, thirds, fourths, fifths, and sixths, as well as some chromatic alterations.

Example 4.31

Compound Intervals

The musical theatre examples explored thus far have employed intervals within the compass of an octave. These intervals are called **simple intervals**. Occasionally, the demands of musical theatre require the performance of intervals beyond an octave—typically for dramatic effect. Intervals that go beyond the scope of the octave are called **compound intervals** and follow the same rules as simple intervals. An M9 uses the same notes as an M2, for example, with an octave added between them. To determine the simple interval equivalent of a compound interval, **subtract 7 from the number of the compound interval**. Inversely, to determine the compound interval equivalent of a simple interval, **add 7 to the number of the simple interval**. Note that when a compound interval is inverted it returns to its simple interval equivalent (see example 4.32, below).

Example 4.32 shows two staves of musical notation illustrating compound intervals. The first staff shows intervals: M9, M2, m10, m3, P11, P4, dim12, and dim5. The second staff shows intervals: aug13, aug6, M14 (rarely used), M7, P15 (rarely used), and P8. Each interval is represented by a pair of notes on a staff.

Example 4.32

[Sound file 4.22]

Musical theatre composers have made effective use of compound intervals to express emotion or to emphasize an important lyric or dramatic moment:

- Stephen Schwartz, in “No Good Deed,” “Defying Gravity,” (*Wicked*) and “Meadowlark” (*The Baker’s Wife*);
- Mark Sandrich Jr., in “To Be Alone with You” and “Too Charming” (*Ben Franklin in Paris*);
- Jerry Herman, in “Song on the Sand” (*La Cage Aux Folles*);
- Frank Loesser, in “Never Will I Marry” (*Greenwillow*);
- Benny Andersson and Björn Ulvaeus, in “Pity the Child” (*Chess*);
- Charles Strouse, in “Children of the Wind” and “For My Mary” (*Rags*);
- Andrew Lloyd Webber, in “All I Ask of You” (*The Phantom of the Opera*), “Love Never Dies” and “Beneath a Moonless Sky” (*Love Never Dies*);
- Stephen Sondheim, in “Later” (*A Little Night Music*).

5

Triads, Seventh Chords, and Nonharmonic Tones

Up - on a rock she sat all day, the love-ly Lor - e - lei;

Example 5.1

▶ [Sound file 5.1]

Preparing a lead sheet for performance invariably involves the creation of an arrangement that may be as simple as the bass-and-chord piano accompaniment of Jerome Kern's "The Lorelei" (*Sally*) in example 5.1 above, or as complex as a full orchestration for a large Broadway-size pit orchestra (see example 5.2, a page from the orchestration of "Tango Amoroso" from the musical version of *Love's Labors Lost*). Unlike a lead sheet that displays a single-staff melody line, arrangements are typically multi-staff constructions in which each staff is identified as a **system** counting from the top down. Example 5.1 above contains three systems while example 5.2 below shows twenty. Note also that instruments of a similar type are bracketed: the two staves of the piano in example 5.1, the woodwind instruments (the top ten staves) and brass (the next four staves) of example 5.2 are bracketed, as well as the piano and plucked strings (guitar and guitar bass).

Some musical theatre composers, such as Leonard Bernstein and Andrew Lloyd Webber prefer to write their own orchestrations (typically with help from others); some, like Stephen Sondheim, write intricate piano accompaniments that are completely fulfilled arrangements, even providing suggestions on how the song should be orchestrated. Jonathan Tunick, Sondheim's perennial orchestrator once told me how delighted he was when he could actually add something to the composer's accompaniments, so specific were Sondheim's piano scores. The subject of the conversation was the exquisite ascending line in "Losing My Mind" (*Follies*) that Tunick inserted in the orchestration of the number. Other composers prefer to provide a skeletal piano score, sketching accompaniment patterns, providing bass lines and chord changes, without concerning themselves with the mood or musical texture of the piece. These are composers who write songs to fit the dramatic situation and let the arrangers and orchestrators provide mood, style, and/or ethnicity to the score. Finally, some composers simply provide a lead sheet with chord symbols, permitting the musical director and a variety of arrangers to complete the arrangement of the songs. In one experience, the composer of a new musical headed for Broadway handed me several pieces of paper: on one was a lyric sheet, on another a bass line, and on the third, a series of chord changes from which I was expected to create an arrangement for a melody that he had scrawled out for the singer (but neglected to provide me).

The Arrangement

In another, the composer arrived on the first day of rehearsal with nothing written down, expecting the cast to learn by rote the melodies he held firmly in his head.

Example 5.2

The musical score for Example 5.2 is a complex orchestral and vocal arrangement. It features the following parts from top to bottom:

- Flute (Fl.)
- Flute I (Fl. I)
- Flute II (Fl. II)
- Flute III (Fl. III)
- Clarinet (Cl.)
- Clarinet I (Cl. I)
- Clarinet II (Cl. II)
- Clarinet III (Cl. III)
- Saxophone (Sax.)
- Saxophone I (Sax. I)
- Saxophone II (Sax. II)
- Saxophone III (Sax. III)
- Trumpet I (Trp. I)
- Trumpet II (Trp. II)
- Trumpet III (Trp. III)
- Trumpet IV (Trp. IV)
- Trumpet V (Trp. V)
- Trumpet VI (Trp. VI)
- Drum (Dr.)
- Piano (Pno.)
- Guitar (Gtr.)
- Saxophone (Sax.)
- Clarinet (Cl.)
- Saxophone (Sax.)
- Percussion (Perc.)
- C. S. (C. S.)
- Timpani (Tm.)

The score is written in a key signature of one sharp (F#) and a common time signature (C). The notation includes various musical symbols such as notes, rests, and dynamic markings.

Harmony with Chords

No matter how specific composers might be in their instructions, they always provide some kind of tonal or chordal basis for their melodies called **harmony**. This harmony is a dynamic vertical function that provides a context and accompaniment for the horizontal melody of a song. Like melody, harmony draws its tones from major or minor scales to produce **chords**,

vertical structures of three or more notes that are sounded together. **Chords have two names:** a **letter name** that identifies the root of the chord, and a **quality name** that specifies the kind of chord (like intervals, the possible qualities are major, minor, augmented, and diminished).

The most basic chord structure is a **triad**, a three-note chord built in thirds, having a root, a third, and a fifth (so named for their intervallic relationship to the root of the triad). There are four basic triads:

- **Major triad**, consisting of a major third on the bottom and a minor third on top: for example, C–E–G. From a dramatic perspective, major triads are positive and sturdy. They create musical declarative sentences;
- **Minor triad**, consisting of a minor third on the bottom and a major third on top: for example, C–E \flat –G. From a dramatic perspective, minor triads are often used to elicit and express emotions. Though they are not necessarily sad, there is a modal quality to a minor triad that can suggest a certain exoticism or dramatic tension;
- **Augmented triad**, consisting of a major third on the bottom and a major third on top: for example, C–E–G \sharp . Dramatically, the augmented triad is a volatile chord seeking upward resolution, a kind of reaching out musically;
- **Diminished triad**, consisting of a minor third on the bottom and a minor third on top; for example, C–E \flat –G \flat . Dramatically, the diminished triad is an unstable chord seeking resolution downward; it is the least sturdy and assured of the triads.

The root gives the triad its name; the third indicates whether the triad is major or minor; the fifth, always a perfect fifth in major and minor triads, can be raised or lowered to create augmented or diminished triads. Note that the augmented triad is a major triad with an augmented fifth; the diminished triad is a minor triad with a diminished fifth (see example 5.3 below).

The image shows four triads on a single staff in treble clef, separated by bar lines. Each triad is represented by three notes beamed together. Below each triad is its name and alternative notations.

C major CM or CMaj	C minor Cm or Cmin	C augmented Caug or C+	C diminished Cdim or C $^{\circ}$
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Example 5.3

[Sound file 5.2]

The notes of a triad are always on adjacent lines or spaces. For example, if the root of the triad is on a line, like the C major triad in example 5.3, the third and the fifth are on the two adjacent lines above it. If the root is in a space, the third and fifth of the triad are in the two adjacent spaces above it.

Exercise 1

On the following staves, build the specified triad **over** the root notes provided. Once you have built all the triads, sing the notes of each triad: first, one note at a time, then all the notes together with the men singing the root, alto voices singing the third, and sopranos singing the fifth.

Example 5.4

Example 5.4 consists of four staves of music. Each staff contains four measures of music, each with a single note and a chord symbol below it. The notes and symbols are: Staff 1: min (F), Maj (G#), + (A), dim (Bb); Staff 2: dim (C), + (D), min (E), Maj (F); Staff 3: + (G), dim (Ab), Maj (Bb), min (Cb); Staff 4: + (D), dim (Eb), min (F), dim (Gb).

On the following staves, build the specified triad **below** the notes provided. Sing the notes of the triad; first, one note at a time, then all the notes with the alto voices singing the root, the men singing the third, and sopranos singing the fifth.

Example 5.5

Example 5.5 consists of four staves of music. Each staff contains four measures of music, each with a single note and a chord symbol above it. The notes and symbols are: Staff 1: min (F), + (G), Maj (A), dim (Bb); Staff 2: Maj (C), min (D), dim (E), min (F); Staff 3: dim (G), min (Ab), dim (Bb), Maj (Cb); Staff 4: + (D), Maj (Eb), min (F), Maj (Gb).

Chord Tones

The notes (tones) of major, minor, augmented, and diminished chords are used as both accompaniment and melody in Western music. The term **chord tones** refers to those notes in melodies or accompaniments that are present in the chordal harmony of the piece (see example 5.6 below).

Example 5.6

Note that the melody line and the chords in the accompaniment use only the notes in the chords specified above the staff.

In musical theatre melodies, chord tones have often presented the three notes of a triad in root position, that is, with the tonic as the bottom note. For example, the first measure of “Maybe” (*Annie*) presents us with a melodic B \flat major triad in root position written as an **arpeggio**—the notes of a chord played horizontally (one at a time), rather than vertically (together). “The Sun Has Got His Hat On” (*Me and My Girl*) opens with another root position arpeggio that lays out a C major chord; “Johnny One-Note” (*Babes in Arms*) opens with an arpeggio of an F major triad beginning with the top note (fifth) and moving downward; and “You’re a Grand Old Flag” (*George Washington Jr.*) opens with a G major arpeggio, again starting on the fifth and falling down to the tonic G. In each case, the melody consists entirely of chord tones, notes that are contained within the harmony of the song.

Inversions of Chords

Drawing our attention back to example 5.1, however, we find that in the accompaniment of the bottom system (remember, in multi-staff compositions, we call each staff line a system), each root position G major triad is preceded by a D major triad with F \sharp (the third of the chord) on the bottom. When the bottom note of a triad is not its root (i.e., when the third or fifth is on the bottom), the triad is called an **inversion**. Inversions can be found in both the accompaniments and melodies of musical theatre works. Jerry Herman, for example, inverts a G major triad to begin the melody of “We Need a Little Christmas” (*Mame*); Frank Loesser opens “A Bushel and a Peck” (*Guys and Dolls*) in exactly the same way with a G major chord with the third on the bottom. Jerry Bock begins the verse of “Sunrise, Sunset” (*Fiddler on the Roof*) with an inverted G minor chord with the fifth on the bottom; and Noel Gay uses an inversion of an F major chord with the fifth (C) on the bottom in the melody of “Lambeth Walk” (*Me and My Girl*).

It is important, therefore, to be able to recognize and perform triads in their various positions melodically and to recognize their harmonic functions in musical theatre accompaniment. Example 5.7 below shows the four basic triads in root position, first inversion, and second inversion in treble and bass clefs. In classical theory, the root position requires no numerical exponent (properly called **figured bass**) since it implies a triad built in thirds. First inversion is recognized by the number six since the distance between the lowest and highest notes is a sixth; the distance between the lowest and middle notes is not indicated because it is a third and thirds are implied; the second inversion is given the figured bass 6/4 since the distance between the lowest and highest notes is a sixth, and between the lowest and middle notes is a fourth. For our purposes it is sufficient to know that **in root position, the bottom tone of the triad is the tonic; in first inversion, the bottom tone is the third; and, in second inversion, the bottom tone is the fifth**. Note that on lead sheets and in vocal selections of musicals, inversions are typically indicated by the name of the chord, followed by a slash mark (/) and the note of the chord in the bass. For example, the first inversion of a G major chord would be written GM/B (or GMaj/B, or often simply G/B).

Example 5.7

[Sound file 5.3]

Example 5.7 displays the triad inversions for four chords: C major, C minor, C augmented, and C diminished. Each chord is shown in its root position, first inversion, and second inversion, with the notes written on a grand staff (treble and bass clefs). Labels below each triad identify its position: 'root position', 'first inversion', and 'second inversion'. The C major triad consists of C, E, G; C minor of C, E♭, G; C augmented of C, E, G♯; and C diminished of C, E♭, G♭.

When presented with an inversion of a triad in the accompaniment of a musical theatre work, simply reposition the tones of the inversion to create a triad in thirds (the root position): when the third is on the bottom (first inversion), drop the top note (the root) down an octave; when the fifth is on the bottom (second inversion), raise the bottom note an octave. In both cases, the change of octave will result in a triad built in thirds (the root position). The bottom note will provide the name of the triad and the structure of major and minor intervals will determine whether the triad is major, minor, augmented, or diminished. In example 5.8 below, the accompaniment for “Solidarity” from *Billy Elliot: The Musical*, we are presented with a series of inverted triads.

Example 5.8

[Sound file 5.4]

Example 5.8 shows a piano accompaniment for the song “Solidarity” from *Billy Elliot: The Musical*. The music is in a key with five sharps (B major) and a common time signature. The accompaniment features a series of inverted triads in the right hand, while the left hand provides a simple bass line. The triads are shown in various positions, including first and second inversions, as indicated by the notes and the context of the text.

Paying close attention to the five sharps in the key signature, if we flip the F♯ up the octave in measure one of the top system, we come up with the triad, B–D♯–F♯, or a B major triad. The triad is written in second inversion. The second measure first presents us with an F♯ major triad (F♯–A♯–C♯) in root position; since the second triad is in first, then second inversion, we need to drop the B down the octave to create another root position triad and find another B major

chord. We have already seen the B major triad in second inversion in measure one so it presents no difficulty in identification. Measure three displays another first inversion, easily managed by dropping the C# down the octave and creating the root position of a C# minor (C#-E-G#) triad. Measure four offers no problems since it presents two triads in root position: G# minor (G#-B-D#) and F# major as in measure two. Note how the bass notes in the bottom system simply double individual notes of the triads.

Exercise 2

Let us return to the lead-sheet melody that opened Unit 1. Write the names of all the triads in the accompaniment over the second system of the arrangement. Name the inversion of each triad between the second and third systems.

The first system of the musical score shows the vocal melody and piano accompaniment for the first four measures. The key signature has one flat (Bb) and the time signature is common time (C). The lyrics are: "Got a rain-bow 'round my shoul-der, Got my hon-ey wait-in' at the". The piano accompaniment consists of chords in the right hand and a bass line in the left hand.

Example 5.9

[Sound file 5.5]

The second system of the musical score shows the vocal melody and piano accompaniment for measures 5 through 8. The lyrics are: "sta-tion: I'm so hap-py I could dance the boo-gie!". The piano accompaniment continues with chords and a bass line.

The third system of the musical score shows the vocal melody and piano accompaniment for measures 9 through 12. The lyrics are: "Soon she'll kiss me, then I'll hold her. Ain't it fun-ny? Such an-ti-ci-". The piano accompaniment continues with chords and a bass line.

Example 5.9
(Continued)

13

pa - tion: It just makes me wan-na dance. For some a

17

fav-'rite haunt sa-loon — might make the grade, — If

21

all they want's the "Moon - light Se-re-nade" — played. —

25

As for me, my feet are frisk-y, The beat is brisk e-nough — to make me

Example 5.9
(Continued)

29

prance. _____ Might seem at first glance that

33

I have found ro - mance, _____ Cuz I'm so hap-py, I'm so

37

ver - y hap - py. Yes - sir, I'm so

40

hap-py I could dance!

Singing Chords

Although it is important to recognize and interpret triads in their various inversions on paper, it is also necessary for musical theatre professionals to be able to perform them since, as we indicated above, a great many musical theatre melodies draw their inspiration from simple triads. The performer's ability to recognize and sing triads however they happen to be voiced is an excellent resource for sight-reading and ear-training, not to mention a fine-honed tool for musical and dramatic analysis.

Exercise 3

In example 5.10 below you will find arpeggios of major, minor, augmented, and diminished triads in all positions. Practice each line slowly, singing either the solfège syllables or numbers, and memorizing how the various tones of each triad feel in your voice. When you have learned one staff, proceed to the next. When you have memorized the second line, proceed to the third. Once you have completed the third line, sing all three lines in order, measures 1 through 12; then mix the lines up, singing measures 1, 5, 9, 2, 6, 10, etc. When you understand the sound, shape, and feeling of the major triads, move on to the minor patterns, studying them in the same way. When you have completed all the staves of the minor triads, review the major triads and sing them along with the minor triads going from measure 1 to measures 5, 9, 13, 17, and 21. When you have memorized the major and minor triads, move on to the augmented and diminished patterns, adding the major and minor as above on the first measure of each line. At the discretion of the instructor, play this exercise on the piano.

Example 5.10

Major

Do Mi Sol Mi Do Do Mi Sol Mi Do Do Mi Sol Mi Do Do Mi Sol Mi Do
1 3 5 3 1 1 3 5 3 1 1 3 5 3 1 1 3 5 3 1

5
Mi Sol Do Sol Mi Mi Sol Do Sol Mi Mi Sol Do Sol Mi Mi Sol Do Sol Mi
3 5 1 5 3 3 5 1 5 3 3 5 1 5 3 3 5 1 5 3

9
Sol Do Mi Do Sol Sol Do Mi Do Sol Sol Do Mi Do Sol Sol Do Mi Do Sol
5 1 3 1 5 5 1 3 1 5 5 1 3 1 5 5 1 3 1 5

13
Minor
Do Me Sol Me Do Do Me Sol Me Do Do Me Sol Me Do Do Me Sol Me Do
1 b3 5 b3 1 1 b3 5 b3 1 1 b3 5 b3 1 1 b3 5 b3 1

17
Me Sol Do Sol Me Me Sol Do Sol Me Me Sol Do Sol Me Me Sol Do Sol Me
b3 5 1 5 b3 b3 5 1 5 b3 b3 5 1 5 b3 b3 5 1 5 b3 b3 5 1 5 b3

21
Sol Do Me Do Sol Sol Do Me Do Sol Sol Do Me Do Sol Sol Do Me Do Sol
5 1 b3 1 5 5 1 b3 1 5 5 1 b3 1 5 5 1 b3 1 5

25 Augmented

Do Mi Si Mi Do Do Mi Si Mi Do Do Mi Si Mi Do Do Mi Si Mi Do
1 3 #5 3 1 1 3 #5 3 1 1 3 #5 3 1 1 3 #5 3 1

29

Mi Si Do Si Mi Mi Si Do Si Mi Mi Si Do Si Mi Mi Si Do Si Mi
3 #5 1 #5 3 3 #5 1 #5 3 3 #5 1 #5 3 3 #5 1 #5 3

33

Si Do Mi Do Si Si Do Mi Do Si Si Do Mi Do Si Si Do Mi Do Si
#5 1 3 1 #5 #5 1 3 1 #5 #5 1 3 1 #5 #5 1 3 1 #5

37 Diminished

Do Me Se Me Do Do Me Se Me Do Do Me Se Me Do Do Me Se Me Do
1 b3 b5 b3 1 1 b3 b5 b3 1 1 b3 b5 b3 1 1 b3 b5 b3 1

41

Me Se Do Se Me Me Se Do Se Me Me Se Do Se Me Me Se Do Se Me
b3 b5 1 b5 b3 b3 b5 1 b5 b3 b3 b5 1 b5 b3 b3 b5 1 b5 b3

45

Se Do Me Do Se Se Do Me Do Se Se Do Me Do Se Se Do Me Do Se
b5 1 b3 1 b5 b5 1 b3 1 b5 b5 1 b3 1 b5 b5 1 b3 1 b5

Example 5.10b
(Continued)

Exercise 4

When you feel comfortable with the triadic patterns above, analyze the triadic structures in example 5.11 below. Write down whether the triads in the melody are major, minor, augmented, or diminished, and indicate which voicing (i.e., inversion) of the chords is being used. Play the opening pitch on the piano and slowly sight-read only two or four measures at a time. When sight-reading, use solfège syllables, numbers, or “La,” as specified by your instructor.

Example 5.11