

# Music Theory Notes

## Chapter 1: Rhythm: Beat and Meter

### Vocab Terms

Term	Definition	Picture
Rhythm	The arrangement of sounds over time.	
Beats	A string of impacts at an even pace.	
Underlying Beat	The beat that keeps track throughout the song, despite irregularities.	
Pulse	Synonym of beat.	
Beats per Minute (BPM)	The amount of impacts per minute of time.	
Tempo	The BPM of a song.	
Meter	A series of strong and weak beats in a song.	
Quadruple Meter	A strong beat every four beats.	
Triple Meter	A strong beat every three beats.	
Duple Meter	A strong beat every two beats.	
Downbeat	The strong beat.	
Notation	Written down.	
Time Signature	Fractionlike numbers without a bar.	
Common Time	Four-four time signature. Abbreviated as capital C.	

Cut Time	A similar abbreviation, for two-two, is capital C with a vertical line through it.	 = 
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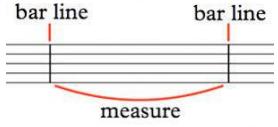
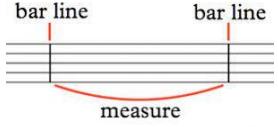
## Concepts

- When counting the beats of a song, count 'one' as the downbeat and restart at 'one' when the downbeat strikes again.
  - **One**, two, three, **One**, two three, **One**, two three.
- Quadruple meter songs tend to have a strongest beat, a weak beat, another strong beat, then a final weak beat. Though the first beat is still the *strongest* beat, making it one.
  - **One**, two, *three*, four, **One**, two, *three*, four, **One**, two, *three*, four.
- Time signatures are not pronounced "four fourths", they are pronounced "four-four".
  - The top number of a time signature is the number of beats per meter.

## Chapter 2: Rhythm and Note Types

### Vocab Terms

Term	Definition	Picture
Note Type	The type of note it is.	
Note Value	How long the note actually is.	
Whole Note	Longest of the common notes, an empty circle without a stem.	
Half Note	Half of the duration of the last note, an empty circle with a stem.	

Quarter Note	Half of the duration of the previous, a full circle with a stem.	
Eighth Note	Half of the duration of the previous, a full circle with a stem and flag aimed to the right.	
16th Note	Half of the duration of the previous, a full circle with a stem and two flags aimed to the right.	
32nd Note	Half of the duration of the previous, a full circle with a stem and three flags aimed to the right.	
Composer	Person who designed the music.	
Transcriber	Person who wrote the music onto paper.	
Measure / Bar	The complete meter of beats on paper.	
Barline	The line separating two measures.	
Dividing Beat	A note that is half the assigned note beat, when counting, it is called "and".	
Stress / Natural Accent	Where the first beat of a meter is given emphasis.	
Rest	Silence.	
Whole Rest	Silence in the same duration as the corresponding note.	
Half Rest	Silence in the same duration as the corresponding note.	

Quarter Rest	Silence in the same duration as the corresponding note.	
Eighth Rest	Silence in the same duration as the corresponding note.	
Sixteenth Rest	Silence in the same duration as the corresponding note.	
Thirty-Second Rest	Silence in the same duration as the corresponding note.	
Dictation	Write down rhythm or pitch from ear.	

### Concepts

- Two notes of the same type make up one note of the larger type. Two halves equals one whole.
- The bottom number in a time signature is what type of note is counted as one beat. In 3-4 meter, there are three beats per meter and each beat is a quarter note. So three quarter notes per meter.
- At the end of a song, there are two barlines written with the second being thicker than the first.
- If there are beats that further divide the measure than just the dividing beat, they are referenced as "e" if they are before the "and", and "a" if they come after the "and".
- The stem can be either up or down, it only matters to conserve space.
  - The flag on eighth notes and below stay on the right.

## Chapter 3: Beams, Dots, and Ties

### Vocab Terms

Term	Definition	Picture

Beams	The bars that connect similar notes together to make reading them easier.	
Partial Beam	Bars that connect notes of different types together.	
Augmentation Dot / Dot	It adds half of the notes value to it.	
Double Dot	It adds half of the notes value <b>and</b> half of that.	
Tie	An arc between two noteheads to combine that as if they were one.	
Accent	A note with a particular emphasis.	
Stress	Emphasis.	
Primary Accent	The downbeat in a meter.	
Secondary Accent	Additional accents on other notes.	
Accent Mark	Notation to give that particular note emphasis.	
Anacrusis / Pickup Measure / Pickup	The measure at the beginning of a song if it does not have a complete set of beats.	

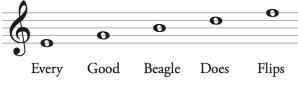
## Concepts

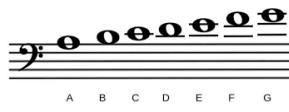
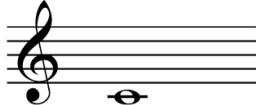
- You only beam notes together that are on the same beat. So in common time (4-4), only beam the notes that add up to a quarter note (two eighth notes).
  - If two notes of different types are to be connected, add additional beams to the amount of the one with more flags.
  - If adjacent notes do not have the same duration, create a partial beam.
- Rests can be dotted the same way as normal notes.
- When possible, choose the dot over the tie.

- A dot cannot carry across a barline, only ties can.
- It is usual that songs that begin with a pickup measure also end with a pickup measure to balance out the lost beats.

## Chapter 4: Pitch in Treble Clef

### Vocab Terms

Term	Definition	Picture
Pitch	The highness or lowness of a sound.	
Frequency	The vibrations per second a sound wave makes. The frequency of a sound determines its pitch.	
Staff / Stave	The set of five horizontal lines acting as the musicians workspace.	
Musical Alphabet	The A to G letters signifying note pitches.	
Note Name / Pitch Name	A letter associated with a certain pitch or frequency.	
Clef	A symbol at the beginning of the staff that determines where each note name lies on the staff.	
Treble Clef	The stylized form of "G on the second line".	 Every Good Beagle Does Flips
Pitch Standard	The established pitch that A would be assigned to (440 Hz).	
Relative Pitch	Being able to dictate or produce other pitches based off of the pitch standard.	
Octave	A scale of the set of notes. Two F's in different octaves still sound similar, but noticeably different.	

Octave Designation	The specific location on the alphabet scale that can be used to differentiate note names of the same letter.	
Ledger Lines	Short lines drawn in for notes that go above or below the main staff.	
Middle C	The C note that lies on the first ledger line below the main staff (C4).	

### Concepts

- Noteheads lie on either the lines of the staff, or the space between the lines.
- Do not put safety lines above or below notes that lie in the spaces above or below the main staff.

## Chapter 5: Bass Clef, Melodies, and Accidentals

### Vocab Terms

Term	Definition	Picture
Bass Clef	The lower range of notes. The lines in ascending order are G, B, D, F, A. The spaces are A, C, E, G.	
Melody	A sequence of pitches and rhythms.	
Accidentals	The symbols that alter the pitch of notes slightly. (Flat, Sharp, Natural)	

Sharp	Play the note one half step above on the keyboard.	#
Flat	Play the note one half step below on the keyboard.	b
Natural	Cancels the other accidentals early, before the end of the measure.	n
Cautionary Accidentals	Accidentals added not out of necessity, but for added clarity.	

### Concepts

- A good melody is consistent with variation. No large pitch gaps, but also not too similar.
- When applying an accidental to a note, that noteline will stay altered until the end of the measure. If there are three E's in one measure, only the first has to be notated with sharp to make all of them sharp. The natural cancels this. This can also be overridden by other accidentals.

## Chapter 6: Enharmonics, Whole Steps, and Half Steps

### Vocab Terms

Term	Definition	Picture
Enharmonics / Enharmonic Equivalents	Two differently notated notes that sound the same.	
Double Sharp	Play the note one full step above on the keyboard.	

Double Flat	Play the note one full step below on the keyboard.	
Interval	The distance between two notes.	
Harmonic	Notes played together.	
Melodic	Notes played in sequence.	
Half Step / Semitone	The pitch directly above or below, including black keys. The smallest form of an interval. (C and C#)	
Whole Step / Whole Tone	Two half steps. (C and D)	
Chromatic Half Step	A half step interval between two notes that sit on the same note line or space. (D# and Eb)	
Diatonic Half Step	A half step interval between two notes that sit on adjacent note lines or spaces. (Dnat and Eb)	

### Concepts

- Enharmonics are used to minimize the amount of accidentals required.
  - It is also custom to try and only use one letter in a given area. If D natural is used, try E flat or C sharp to represent the black keys around D.
- An accidental doesn't necessarily mean to move up to a black key. C flat is B as B sharp is C.

## Chapter 7: Scales and Generic Intervals

### Vocab Terms

Term	Definition
Scale	A series of notes or pitches that ascend or descend in a certain repeating pattern.
Tonic	The note at the beginning and end of a scale.

	The main central note of the scale.
Pentatonic Scale	A five note scale.
Typical Pentatonic Scale	The five black notes in an octave.
Scale Degrees	The number equivalent given to each note in a scale. Beginning with a tonic, number it '1' and count up until returning to the tonic, naming it '1' again.
Chromatic Scale	The scale that ascends or descends purely in half steps. It includes all of the notes in an octave on the keyboard.
Diatonic Scale	A scale that uses each of the letter notes once.
C Major Scale	All of the white keys on the keyboard, starting with C. It is diatonic.
Generic Interval	The general distance between two letter notes, ignoring accidentals. Find the generic interval by counting the note names between the notes, including the notes themselves. The interval between C and D is 2 because there are two notes involved.
Unison Interval	A note interval of 1. (The same note played twice.)
Octave Interval	A note interval of 8, from one letter note to the same letter note ascended or descended on the scale. (C3 and C4)
Compound Intervals	Intervals greater than 8.
Simple Interval	The interval between two note names, ignoring octaves. The interval C3 and E5 is 17, but its simple interval is 3 because C, D, E.
Reduce Intervals	To translate intervals from compound to simple.

## Concepts

- Musicians write scales starting with the first note and ending with the first note again. Meaning a notated scale will have one more note than it actually has because the tonic is shown twice, at the beginning and end.
- When written in ascending order, the chromatic scale typically uses all sharps. Written in descending order, it uses all flats.

- A diatonic scale does not restrict to only white keys, sharps or flats can be involved, only if each note letter is used once.
- The C Major Scale is in intervals made up of 5 whole steps and 2 half steps. The half steps are between notes 3 and 4, and 7 and 1.
- Intervals don't have to be melodic (two notes spaced apart in time), they can also be harmonic (two notes played at the same time).
- When adding generic intervals, add the intervals together and minus 1. This is because you do not count the middle note twice in the resulting scale.

## Chapter 8: Subdivisions and Compound Meter

### Vocab Terms

Term	Definition	Picture
Subdivision	The smaller rhythmic values that come together to form a beat.	
Triple Subdivision	Where each beat is split into three smaller values.	
Duple Subdivision	Where each beat is split into two smaller values.	
Compound Meter	The basic subdivision of the beat is three.	
Simple Meter	The basic subdivision of the beat is two.	
Triplet	A subdivision of three amidst a simple meter.	
Tuplets	Rhythmic groups that divide a beat in a different way than the time signature does. A triplet is a form of tuplet.	

### Concepts

- When writing time signatures, musicians do not write in the denominator a value corresponding to a dotted note, instead, they put the number of subdivisions per meter in

the numerator and the value of the subdivisions as the denominator. So in a meter where there are four beats yet 12 eighth notes, the signature would be 12-8 because there are 12 subdivisions and each subdivision is an eighth note.

- To find the number of beats per meter in one of these time signatures, divide the numerator by three. Therefore, all compound times have numerators divisible by three.
- When counting compound time, start the beat with the beat number, then follow with "ki" and "da". 1, ki, da, 2, ki, da, 3, ki, da, 4, ki, da.

## Chapter 9: Major Scales

### Vocab Terms

Term	Definition	Picture
Major Scales	Diatonic scales that follow the 2 full, 1 half, 3 full, 1 half step pattern.	
Scale Function	Notes from different scales in the same position.	
Seventh Scale Degree / Leading Tone	Being the note just before the tonic, it is often that the tonic follows this note. The leading tone leads to the tonic.	
Resolves	When an expectation is fulfilled in music. When tense music is followed by satisfying music.	
Tonic	The first note in a scale.	
Supertonic	The second note in a scale.	
Mediant	The third note in a scale.	
Subdominant	The fourth note in a scale.	
Dominant	The fifth note in a scale.	
Submediant	The sixth note in a scale.	

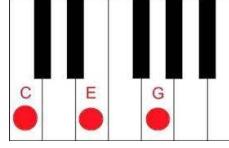
Leading Tone	The seventh note in a scale.	
Solfege	A system where each scale degree is given a syllable.	

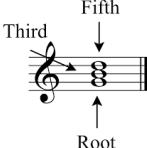
## Concepts

- You can create scales by starting with any note and following the pattern described above or others.
  - Scales can be descending.
- Each scale degree has a function name and a solfege name.

## Chapter 10: Tonic and Dominant Triads

### Vocab Terms

Term	Definition	Picture
Chord	Two or more notes sounding at the same time.	
Triad	A chord of at least three notes with three note names that can be a series of thirds.	 <p>(Three notes, three note names, in intervals of thirds.)</p>
Doubled	When a note name appears twice on a triad, as in an octave.	
Tripled	When a note name appears thrice on a triad.	

Stacked Thirds	A pair of thirds stacked on top of each other.	
Chord Tones	The notes that make up a chord.	
Bass / Root (Chord Tone)	The lowest note in a triad chord.	
Third (Chord Tone)	The note with an interval of a third above the root in a triad.	
Fifth (Chord Tone)	The note with an interval of a fifth above the root in a triad. (The fifth and the highest note aren't always the same.)	
Accompany a Melody	To play chords that fit with the melody.	
Harmonizing a Melody	To provide more depth to the song with a melody than just added sounds.	
Key	When the chords and melody come from the same scale, the song is often referred to be in that key.	
Tonic Chord	Gives a feeling of resolution. Built with a triad of scale degree 1, containing the scale degrees 1, 3, and 5. Often referred to as the roman numeral I.	
Dominant Chord	Gives a feeling of tension, often followed by the tonic chord. Built with a triad of scale degree 5, containing the scale degrees 5, 7, and 2. Often referred to as the roman numeral V.	
Chorale Style	Four parts defined by each group singing it in a choir.	
Soprano (Chorale Style)	Highest group of voices.	
Alto (Chorale Style)	Mid highest group of voices.	
Tenor (Chorale Style)	Mid lowest group of voices.	
Bass (Chorale Style)	Lowest group of voices.	
Voicing a Chord	Choosing what instruments to play which notes of a chord.	

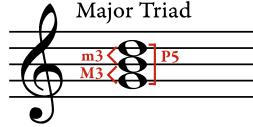
Chord Progression	A series of chords.	I-V-I
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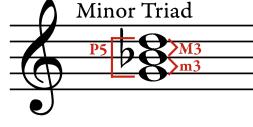
## Concepts

- There can be accidentals applied to triads due to it not changing the note names or note intervals.
- When finding stacked thirds, the notes in a triad can be shifted up or down octaves.
  - Try not to move the lowest note when finding stacked thirds.
- If you use the root notes of the C Major Scale and make a series of triads, musicians can notate these triads with Roman Numerals.
- Tips on making good harmonizing chords:
  - One triad per measure of the melody.
  - Use triads of the same scale as the melody.
  - For each measure, use the notes of a triad that appears the most.

## Chapter 11: Specific Intervals and Triad Types

### Vocab Terms

Term	Definition	Picture
Major Interval	An interval that is one half step larger than the Minor Interval.	M2, M3, M6, M7
Minor Interval	An interval that is one half step smaller than the Major Interval.	m2, m3, m6, m7
Interval Qualities	Types of intervals. (Major, Minor, Perfect, Augmented, Diminished)	
Perfect	When both notes of the interval appear in both notes' major scales.	P4, P5
Major Triad	If the triad contains a perfect 5th and a major 3rd.	 <p>Major Triad</p>

Minor Triad	If the triad contains a perfect 5th and a minor 3rd.	
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## Concepts

- There has to be an interval of 2 or more to be considered major or minor.
- Intervals are major if both notes appear in the major scale with the lower note being the tonic.
- Intervals are minor if both notes appear in the major scale with the higher note being the tonic.
- If both notes in an interval have the same accidental, you can remove both and still be able to find whether it's major or minor.
- Using the table below can help identify the interval quality by counting half steps. When counting descending intervals, always use this table:

Generic Interval	Minor	Major	Perfect
Unison	-	-	0
Second	1	2	-
Third	3	4	-
Fourth	-	-	5
Fifth	-	-	7
Sixth	8	9	-
Seventh	10	11	-
Octave	-	-	12

## Chapter 12: Subdominant Triad and I-IV-V-I

### Vocab Terms

Term	Definition	Picture
Subdominant Triad	The Major Triad with the root note of scale degree 4. The triad is a whole step below the Dominant Triad.	
Chord Progression	A sequence of chords.	
Musical Phrase	An excerpt of music that contains harmonic motion.	
Harmonic Motion	Changes in chords and their functions.	
Cadence	The chords at the end of a phrase that help conclude it.	
Authentic Cadence / Dominant - Tonic Cadence	A V-I cadence.	
Harmonic Rhythm	The rate the chords change.	
Half Cadence	A phrase that ends toward the dominant and that doesn't settle back down to the tonic.	

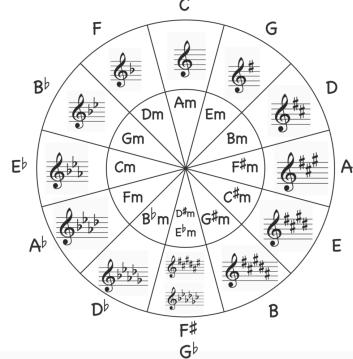
### Concepts

- The subdominant triad gives a feeling of moving away from home, while the dominant triad gives a feeling of guidance toward home. They are often used in pairs as the subdominant is used to prepare for the dominant.

## Chapter 13: Major Key Signatures and the Circle of Fifths

### Vocab Terms

Term	Definition	Picture
Transposition	Moving notes of a melody from one scale to another using a consistent factor.	

Key Signature	Written after the clef of the beginning of the staff, it signifies the accidentals used in the melody, making it easier to notate.	
Circle of Fifths	Musicians can add sharps to key signatures, flip to flats, then remove flats to change what scale they are in. They've visualized this with the Circle of Fifths. This is because when changing from adjacent scales, you are ascending or descending a perfect fifth (or 7 half steps).	

## Concepts

- The key signature applies to all octaves of the note that the accidental appears on.
- Sometimes, key signatures will be used even when the notes don't need them. They are instead used to help communicate what scale or key the song is in. Maybe F Major.
- The sharps of the key signatures are placed in a specific order,

Major Key	Number of Sharps	Sharp Names
C	0	none
G	1	F#
D	2	F#, C#
A	3	F#, C#, G#
E	4	F#, C#, G#, D#
B	5	F#, C#, G#, D#, A#
F#	6	F#, C#, G#, D#, A#, E#

C#	7	F#, C#, G#, D#, A#, E#, B#
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- This can be memorized with the mnemonic: **Fat Cats Go Dancing At Elegant Balls.**
- The key can be found by finding the note that is one half step higher than the last sharp.
- Similarly, there is a specific order of flats,

Major Key	Number of Flats	Flat Names
C	0	none
F	1	Bb
Bb	2	Bb, Eb
Eb	3	Bb, Eb, Ab
Ab	4	Bb, Eb, Ab, Db
Db	5	Bb, Eb, Ab, Db, Gb
Gb	6	Bb, Eb, Ab, Db, Gb, Cb
Cb	7	Bb, Eb, Ab, Db, Gb, Cb, Fb

- This can be memorized with the mnemonic: **BEAD + Greatest Common Factor.**
- The key can be found by finding the note that is the second to last flat.
- On the treble clef, the first sharp (F#) is placed on F5, while the first flat (Bb) is placed on B4. The following accidentals then zig-zag unless they would be placed on a ledger line in which case they would be transposed an octave to fit on the staff. On the bass clef, F# is placed on F3 while Bb is placed on B2.

## Chapter 14: “Chives”: Non-Harmonic Passing and Neighbor Tones

### Vocab Terms

Term	Definition	Picture
Neighbor Tones	A tone that is one step away from the previous note.	
Upper Neighbor Tone	A tone that is one step above the previous note.	

Lower Neighbor Tone	A tone that is one step below the previous note.	
Passing Tones	A filler note that takes the space between two notes.	
Accented Neighbor Tone	A neighbor tone given emphasis with a chord change.	
Ornamentation	Process of adding non-harmonic tones.	

### Concepts

- Chord tones typically fall on the strong beats while non-harmonic tones fall on weak beats.

## Chapter 15: The Submediant Triad

### Vocab Terms

Term	Definition	Picture
Major Triad	A triad with a major third between the first and third notes and a minor third between the third and fifth notes.	
Minor Triad	A triad with a minor third between the first and third notes and a major third between the third and fifth notes.	
Submediant Triad	A triad with the root note of the scale degree 6. A minor triad, its roman numeral is lowercase 6: vi.	
Antecedent-Consequent Pair	Two phrases with similar melodies where the first ends on V and the second ends on I.	
Deceptive Cadence	Ending a phrase with a V-vi where a V-I was expected.	

## Concepts

- Because the Submediant triad shares two pitches with both the Tonic and Subdominant triads, it can be used to create a smooth transition from the Tonic to the Subdominant triads.

## Chapter 16: Minor 1: Natural/Modal Minor

### Vocab Terms

Term	Definition	Picture
Minor Mode	A different type of writing music from Major mode. It uses various scales and systems, but the simpler one is the natural minor or modal minor system.	
Natural Minor / Modal Minor System	The simpler of the two systems and only uses one minor scale: the natural minor scale.	
Natural Minor Scale	The C Major scale but starting on the sixth degree with all white keys. It has an interval pattern of W-H-W-W-H-W-W.	
Relative Minor / Relative Minor Key	A minor key that is related to and constructed off of another Major Key.	
Parallel Keys	Two keys that have the same tonic but are in different modes. (C Major and C Minor.)	

## Concepts

- It is customary to write the names of Major scales with capital letters and the names of Minor scales with lower case letters.
- When finding the relative minor scale of a major scale, you can simply travel three steps clockwise around the circle of fifths to find it.
- The names of the scale degrees of the notes in a minor scale are all the same except for the seventh degree note which is called the subtonic because it is a whole step below the tonic, not half step like in the major scale.

## Chapter 17: Minor 2: Harmonic and Melodic

### Vocab Terms

Term	Definition	Picture
Harmonic Minor	The form of minor that is the same as natural minor but it uses the leading tone in place of the subtonic.	
Harmonic Minor Scale / Harmonic Minor Collection	The same scale as natural minor but the subtonic or scale degree 7 is higher by half a step.	
Augmented Interval	Any interval that is larger than a major or perfect.	
Ascending Melodic Minor Scale	A minor scale that preserves the leading tone but also avoids an augmented interval. Same scale as natural minor but the scale degrees 6 and 7 are both raised by half a step.	

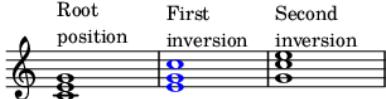
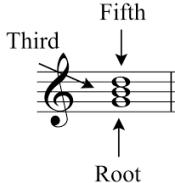
### Concepts

- The rules stated above for melodic minor scales only apply if the scale is ascending. If it is descending, the scale reverts back to the natural minor scale.
- When writing a song in a minor key, you would use the harmonic minor scale for your chord progressions and harmonic notes, and use the melodic minor scale for your melody.

## Chapter 18: Consonance, Dissonance, and Chords in First Inversion

### Vocab Terms

Term	Definition	Picture

Non-Harmonic Notes	Notes in the melody that are not a part of the chord accompanying them.	
Consonance / Consonant	Intervals that are stable and do not try to resolve to another note. Thirds, Fifths, Perfect Unisons and Octaves are consonants.	
Dissonance / Dissonant	Intervals that are unstable and try to resolve to consonant intervals. Seconds and Sevenths are dissonants.	
Root Position	When the root and the base are the same in a triad.	
First Inversion	When the third of a triad is the bass position.	
Root Note	The lowest note of a <i>stacked</i> triad.	
Bass Note	The lowest note of the <i>given</i> triad.	

## Concepts

- Perfect fourths must be treated differently. If the chord contains a perfect fourth and the lower note is *not* the base note, the chord is treated as a consonant. If the lower note of the perfect fourth *is* the base note, the chord is treated as a dissonant.
- Sixths are different as well. In general, they are consonants. However, if the lower note of the sixth *is* the base note, the chord overall sounds weak, but not dissonant. Therefore, musicians never put these weak chords in the first or last chord of a phrase, but they are used freely everywhere else.
- A superscript 6 after the roman numeral can be written to denote a first inversion in a chord progression.  $I^6$
- The roman numeral refers to the scale degree of the root of a triad, not the base.