FOREWORD

Listening to music is one of the most popular pastimes, enjoyed by people all over the world. Whether listening to recordings or attending live concerts, music has the ability to inspire and give pleasure to almost everyone.

For many students and professionals, playing a musical instrument is an even more enjoyable experience. But understanding how music is constructed; how scales and chords are formed; the relationship between major and minor keys; and how music is composed through melody, harmony and chord progressions can enhance the musical experience even further. There is also current scientific research which proves that studying music improves I.Q. scores—it actually makes students smarter.

*Alfred's Essentials of Music Theory* is designed for students of any age, whether listener or performer, who want to have a better understanding of the language of music.

**BOOKS 1, 2, 3:** This theory course is made up of three books of 40 pages each, with each book containing six units. A unit consists of four or five pages of instructional material (including written exercises), an Ear Training page and a Review page.

Each new term is capitalized the first time it is introduced (GRAND STAFF) and will also be listed in the Glossary & Index of Terms and Symbols (along with the page number) at the end of each book. As the Glossary only contains terms introduced within the book, it is a complete listing of subjects included.

**COMPLETE BOOK:** *Alfred's Essentials of Music Theory* is also available in one complete book of 120 pages that contains all the pages included in the separate books. An alto clef (viola) edition is also available in one complete or three separate books.

**TEACHER'S ANSWER KEY:** A Complete Book with the answers for the exercises from the Lesson and Review pages and music for the Ear Training pages. Also included is a reproducible sheet for listing student names and grades for the Ear Training and Review pages.

**COMPACT DISCS:** One of the difficulties in studying music theory is not being able to hear what is being learned. The two CDs available (CD 1 covers Books 1 and 2, CD 2 covers Book 3) not only allow the student to hear the musical elements discussed, but offers the student opportunities to test their listening skills. Musical examples are played by a variety of instruments (piano, flute, clarinet, alto saxophone, trumpet, trombone, violin and cello).

**COMPUTER SOFTWARE:** The use of computers in the music studio has become commonplace in many schools and universities. *Alfred's Essentials of Music Theory* offers companion software for both IBM-compatible and Macintosh computers that will allow the instructor to test and drill students, keep track of their students' progress, and make use of interactive instruction in the classroom.

Thanks to:
John O'Reilly, E.L. Lancaster,
Matt McKagan, Todd Helm
and especially Bruce Goldeis.
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Tetrachords and Major Scales

The word TETRA means four. A TETRACHORD is a series of four notes having a pattern of whole step, whole step, half step. The four notes of a tetrachord must be in alphabetical order.

The MAJOR SCALE consists of eight notes—two tetrachords joined by a whole step.

Each scale begins and ends on a note of the same name, called the KEYNOTE.

A scale can begin on any note.

The tones of a scale are also called the DEGREES (or steps) of the scale.

There are eight degrees in a major scale:

\[
\begin{align*}
1 & \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \quad 8 \\
& \quad H \\
\end{align*}
\]

In all major scales, half steps occur between the 3rd and 4th and the 7th and 8th scale degrees.

The distances between all other scale degrees are whole steps.

Exercises

1. Write tetrachords starting on the following notes, then add the note names under the staff. The notes must be in alphabetical order. Write where the whole (W) and half (H) steps occur above the staff.

2. Write a C major scale. Add the scale degrees under each note and indicate where the whole and half steps occur above the staff.

3. Write whether the distance between each note is a whole step (W) or half step (H).
The Sharp Scales — G and D Major

Using the same pattern for tetrachords of whole step, whole step, half step, you can build the sharp scale of G major with the G and D tetrachords. G is the 2nd tetrachord of the C major scale.

Using the same pattern for tetrachords, you can build the sharp scale of D major with the D and A tetrachords. D is the 2nd tetrachord of the G major scale.

Important!
- The 2nd tetrachord of the C major scale is the 1st tetrachord of the G major scale.
- The 2nd tetrachord of the G major scale is the 1st tetrachord of the D major scale.

Starting with the C major scale, the 2nd tetrachord is always the 1st tetrachord of the following sharp scale. This overlapping pattern continues through all the major sharp scales.

Exercises

1. Write tetrachords starting on the following notes, then add the note names below the staff. The notes must be in alphabetical order. Remember to include the necessary accidentals. Write where the whole and half steps occur above the staff.

2. Write a G major scale. Add the scale degrees and indicate where the whole and half steps occur.

3. Write a D major scale. Add the scale degrees and indicate where the whole and half steps occur.
The Flat Scales — F and B♭ Major

Using the same pattern for tetrachords, you can build the flat scale of F major with the F and C tetrachords. C is the 1st tetrachord of the C major scale.

Using the same pattern for tetrachords, you can build the flat scale of B♭ major with the B♭ and F tetrachords. F is the 1st tetrachord of the F major scale.

Important!
- The 4th scale degree of the C major scale (F) is the 1st scale degree of the F major scale.
- The 4th scale degree of the F major scale (B♭) is the 1st scale degree of the B♭ major scale.

Starting with the C major scale, the 4th scale degree is always the 1st scale degree (keynote) of the following flat scale. This pattern continues through all the major flat scales.

Exercises

1. Write tetrachords starting on the following notes, then add the notes names below the staff. The notes must be in alphabetical order. Remember to include the necessary accidentals. Write where the whole and half steps occur above the staff.

   ![Tetrachords](image1)

2. Write an F major scale. Add the scale degrees and indicate where the whole and half steps occur.

   ![F Major Scale](image2)

3. Write a B♭ major scale. Add the scale degrees and indicate where the whole and half steps occur.

   ![B♭ Major Scale](image3)
Key Signatures — The Sharp Keys

When writing the scales on page 44, you added sharp signs before the appropriate notes.

In the G scale, you added a sharp sign before each F; in the D scale, you added sharp signs before each F and C.

To make writing and reading music easier, you can place all of the sharps used in a scale or piece immediately after the clef sign. This is called the KEY SIGNATURE. It indicates the notes that will be sharped each time they appear for the entire piece.

In this case, any F will always be played sharp (unless there is a natural sign before the F).

Sharps written in the key signature always appear in a specific order. Here are the sharp key signatures of the scales you know:

Key of G — 1 sharp:

Key of D — 2 sharps:

The order of sharps in the key signature for up to two sharps is F C.

Important!
To figure out the name of a major key from the key signature, go up a half step from the last sharp. As an example: a key signature of F♯ would be the key of G major; a key signature of F♯ and C♯ would be the key of D major.

Exercises

1. Write the order of the first two sharps in a key signature.

2. If C♯ is the last sharp in the key signature, the major key name would be ________.

3. Name the following major key signatures.

   a. ________  b. ________  c. ________  d. ________

4. Write the following major key signatures.

   a. D major  b. G major  c. G major  d. D major
Key Signatures — The Flat Keys

When writing the scales on page 45, you added flat signs before the appropriate notes. In the F scale, you added a flat sign before each B; in the B♭ scale, you added flat signs before each B and E.

Just like sharp signs, you can place all of the flats used in a scale or piece in the KEY SIGNATURE. It indicates the notes that will be flatted each time they appear for the entire piece.

In this case, any B will always be played flat (unless there is a natural sign before the B).

Flats written in the key signature always appear in a specific order. Here are the flat key signatures of the scales you know:

Key of F — 1 flat:

Key of B♭ — 2 flats:

The order of flats in the key signature for up to two flats is B E.

Important!
To figure out the name of a major key from the key signature, remember that one flat is the key of F; for two or more flats, the next-to-last flat is the name of the key. As an example, a key signature of B♭ and E♭ would be the key of B♭ major.

Exercises

1. Write the order of the first two flats in a key signature.

2. If B♭ is the next-to-last flat in the key signature, the major key name would be ________.

3. Name the following major key signatures.

   a. ________  b. ________  c. ________  d. ________

4. Write the following major key signatures.

   a. F major  b. B♭ major  c. B♭ major  d. F major
The Remaining Major Scales with Key Signatures

Once you are familiar with how to build tetrachords, it is easy to build any major scale. Altogether, there are 15 major scales: 7 sharp keys, 7 flat keys, and the key of C, which has no sharps or flats.

You are already familiar with the scales and key signatures of five of the 15: C, G (F♯), D (F♯, C♯), F (B♭) and B♭ (B♭, E♭). Here are the remaining 10.

A Major (3 sharps: F♯, C♯, G♯)  E♭ Major (3 flats: B♭, E♭, A♭)
B Major (5 sharps: F♯, C♯, G♯, D♯, A♯)  D♭ Major (5 flats: B♭, E♭, A♭, D♭, G♭)

The complete order of sharps in the key signature is:

F C G D A E B.

A helpful reminder:

Fat Cats Go Down Alleys Eating Bread.

The complete order of flats in the key signature is:

B E A D G C F.

A helpful reminder: BEAD + G C F.

There are, however, only 12 unique sounding major scales. The following are ENHARMONIC SCALES; they sound the same but are written differently:

- B major sounds the same as C♭ major
- F♯ major sounds the same as G♭ major
- C♯ major sounds the same as D♭ major

Exercises

1. Name the following major key signatures.
   a. __________   b. __________   c. __________   d. __________   e. __________   f. __________

2. Write the following key signatures.
Chromatic Scale

The CHROMATIC SCALE is made up entirely of half steps in consecutive order. On a keyboard, therefore, it uses every key, black and white. When the scale goes up, it is called ascending; when the scale goes down, it is called descending.

The chromatic scale may begin on any note. In a chromatic scale, there are 12 tones.

C Chromatic Scale

The ascending chromatic scale starting on C uses sharp signs.

The descending chromatic scale starting on C uses flat signs.

An ascending chromatic scale starting on F looks like this:

A descending chromatic scale starting on G looks like this:

Exercises

1. What is the distance between each pitch in a chromatic scale?

2. Write an ascending and descending chromatic scale starting on A.

3. Write an ascending and descending chromatic scale starting on B.
Intervals

An INTERVAL in music is the distance in pitch between two notes. The interval is counted from the lower note to the higher one, with the lower note counted as 1.

Intervals are named by the number of the upper note (2nds, 3rds, etc.) with two exceptions. The interval between notes that are identical is called a UNISON (also called a PRIME INTERVAL); the interval of an 8th is called an OCTAVE. The intervals below are all written with C as the lower note.

Intervals are called MELODIC INTERVALS when they are sounded separately and HARMONIC INTERVALS when they are sounded together.

EVEN NUMBERED INTERVALS of 2nds, 4ths, 6ths and octaves are written from line to space or space to line.

ODD NUMBERED INTERVALS of unisons, 3rds, 5ths and 7ths are written from line to line or space to space.

Exercises

1. Name the intervals.

2. Indicate whether the following are melodic (M) or harmonic (H) intervals.

3. Write the harmonic interval indicated above the following notes.

2nd, 4th, 5th, unison, 3rd, octave, 7th, 6th.
Circle of Fifths

The CIRCLE OF FIFTHS is useful in understanding scales and key signatures. It shows the relationship of one key to another by the number of sharps or flats in the key signature and the order in which the sharps or flats occur.

**SHARP KEYS**
Start with C and go clockwise in ascending tetrachord order.

**FLAT KEYS**
Start with C and go counterclockwise in descending tetrachord order.

The sharp keys ascend by 5ths (W W H W);* the flat keys descend by 5ths (H W W W).

**SHARP SCALES**
Starting with C, the 2nd tetrachord of the ascending major scale becomes the 1st tetrachord of the following ascending scale. The scale's name is derived from the 1st note of that tetrachord, and one sharp is added to the key signature.

**FLAT SCALES**
Starting with C, the 2nd tetrachord of the descending major scale becomes the 1st tetrachord of the following descending scale. The scale's name is derived from the 1st note of that descending tetrachord, and one flat is added to the key signature.

**OPTIONAL**
Another way to determine the order of the flat keys is to ascend by 4ths (W W H).
Starting on C: C to F, F to B♭, B♭ to E♭, etc.

<table>
<thead>
<tr>
<th>Sharp scales</th>
<th>G Major Scale</th>
<th>A Major Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C Major Scale</td>
<td>D Major Scale</td>
</tr>
<tr>
<td></td>
<td>E Major Scale</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flat scales</th>
<th>F Major Scale</th>
<th>E♭ Major Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C Major Scale</td>
<td>B♭ Major Scale</td>
</tr>
<tr>
<td></td>
<td>A♭ Major Scale</td>
<td></td>
</tr>
</tbody>
</table>


The order of sharps in the key signature: F C G D A E B.
The order of flats in the key signature: B E A D G C F.
Perfect and Major Intervals

The interval between the keynote of a major scale and the unison, 4th, 5th or octave of that scale is called a PERFECT INTERVAL.

```
\[\text{Perfect Unison} \quad \text{Perfect 4th} \quad \text{Perfect 5th} \quad \text{Perfect Octave}\]
```

The interval between the keynote of a major scale and the 2nd, 3rd, 6th or 7th of that scale is called a MAJOR INTERVAL.

```
\[\text{Major 2nd} \quad \text{Major 3rd} \quad \text{Major 6th} \quad \text{Major 7th}\]
```

THE DIATONIC INTERVALS OF THE MAJOR SCALE

When the keynote and the upper note of an interval are from the same major scale, it is called a DIATONIC INTERVAL. All diatonic intervals in the major scale are either perfect (P) or major (M). The perfect intervals are the unison, 4th, 5th and octave; the major intervals are the 2nd, 3rd, 6th and 7th. This is true for all major scales. P1 indicates a perfect unison; P8 indicates a perfect octave.

```
\[\text{P1 Unison} \quad \text{M2} \quad \text{M3} \quad \text{P4} \quad \text{P5} \quad \text{M6} \quad \text{M7} \quad \text{P8 Octave}\]
```

Exercises

1. Name the harmonic intervals and indicate whether they are perfect or major.

```
\[\text{M3}\]
```

2. Write the note above the given note to complete the harmonic interval.

```
\[\text{P5 P8 M3 M7 M6 P4 M2 P1}\]
Minor Intervals

When the interval between the two notes of a major interval (2nd, 3rd, 6th or 7th) is decreased by a half step, they become MINOR INTERVALS. For example, a major 3rd (M3) becomes a minor 3rd (m3) when decreased by a half step. A small letter “m” is used to signify a minor interval. Only major intervals may be made into minor intervals—perfect intervals may not.

How major intervals may be changed to minor intervals:

2nds

3nds

6ths

7ths

Exercises

1. Name the intervals.

2. Write the note above the given note to complete the harmonic interval.

3. Name the intervals, indicating whether they are perfect (P), major (M) or minor (m).

m6
m3 m6 m2 m7 m2 m6 m3 m7
P5
Augmented and Diminished Intervals

The word augmented means “made larger.” When a perfect or major interval is made larger by a half step, it becomes an AUGMENTED INTERVAL. For example, a perfect 5th (P5) becomes an augmented 5th (aug 5). To raise a sharp note by a half step, use a DOUBLE SHARP ♭:

```
| aug 1 | aug 2 | aug 3 | aug 4 | aug 5 | aug 6 | aug 7 | aug 8 |
```

The word diminished means “made smaller.” With the exception of the perfect unison, any perfect or minor interval that is made smaller by a half step becomes a DIMINISHED INTERVAL. For example, a perfect 4th (P4) becomes a diminished 4th (dim 4). To lower a flat note by a half step, use a DOUBLE FLAT ♭:

```
| dim 2 | dim 3 | dim 4 | dim 5 | dim 6 | dim 7 | dim 8 |
```

Since lowering either note of a perfect unison would actually increase its size, the perfect unison cannot be diminished, only augmented.

When the keynote and the upper note of an interval are not from the same major scale, it is called a CHROMATIC INTERVAL. Minor, diminished, and augmented intervals are always chromatic intervals in major keys.

Exercises

1. Name the augmented intervals.

2. Write the note above the given note to complete the augmented harmonic interval.

3. Name the diminished intervals.

4. Write the note above the given note to complete the diminished harmonic interval.
Solfège and Transposition

SOLFÈGE is a system of reading notes by assigning a different syllable to each note. The following syllables are used for all major scales as they relate to the scale degrees:

\[
\begin{array}{cccccccc}
1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 \\
\text{Do} & \text{Re} & \text{Mi} & \text{Fa} & \text{Sol} & \text{La} & \text{Ti} & \text{Do}
\end{array}
\]

MOVEABLE DO means that the syllables apply to the same scale degrees, regardless of what key you are in. For example, in the key of C, the keynote C is called “Do”. In the key of F, the keynote F is also called “Do”.

When a melody is rewritten with the exact same sequence of notes and intervals into another key, it is called TRANSPOSITION. This raises or lowers the notes to make a melody easier to sing or play, or so it can be played by an instrument in another key.

The easiest way to transpose is by interval. For example, if a melody is in the key of C and you want to transpose it to the key of D, then you would rewrite all notes a major 2nd higher.

Exercises

1. Write the syllable names under the notes of the following melody.

2. Add solfège syllables, then transpose the following melody up a major 2nd adding solfège syllables. Add the new key signature.

3. Add solfège syllables, then transpose the following melody down a major 2nd adding solfège syllables. Add the new key signature.
Sixteenth Notes

Add a flag to the stem of a quarter note \( \) and it becomes an 8th note \( \). Add a flag to the stem of an 8th note \( \) and it becomes a 16th NOTE \( \).

In \( \frac{3}{4} \) time: Two 16th notes equal the duration of one 8th note. \( \frac{2}{4} \) = \( \frac{1}{4} \)

Four 16th notes equal the duration of one quarter note. \( \frac{4}{4} \) = \( \frac{1}{4} \)

In \( \frac{2}{4} \), \( \frac{3}{4} \), and \( \frac{4}{4} \) time:

a 16th note \( \) is equal to one-quarter count.

For four 16th notes, count “1 e & a” or “ti-ri ti-ri.”

\[ \text{Ti-ri ti-ri Ta} \quad \text{Ti-ri ti-ri Ta} \]

16th notes can be drawn:

- with flags attached to the stems for one 16th note.

\[ \text{or} \]

- or with 2 beams for two or more 16th notes.

\[ \text{or} \]

Write four 16th notes.

Write two 16th notes.

Write four 16th notes.

16th notes can also be combined with 8th notes:

\[ \text{1 (e) } \& \text{ a 2 (e) } \& \text{ a 3 (e) } \& \text{ a 4 (e) } \& \text{ a 1 e } \& \text{ a 2 e } \& \text{ a 3 e } \& \text{ a 4 e } \& \text{ a} \]

\[ \text{ti} \quad \text{ti-ri } \text{ti-ri} \quad \text{ti-ri } \text{ti-ri} \quad \text{ti-ri } \text{ti-ri} \quad \text{ti-ri } \text{ti-ri} \]

Exercises

1. Add stems with flags or beams to make 16th notes as indicated.

   a. Flags
   b. Beams (two sets)
   c. Flags
   d. Beam (one set)

2. Fill in the correct number:

   a. \( \frac{2}{4} \) = \( \frac{1}{4} \)
   b. \( \frac{3}{4} \) = \( \frac{1}{4} \)
   c. \( \frac{4}{4} \) = \( \frac{1}{4} \)
   d. \( \frac{5}{4} \) = \( \frac{1}{4} \)

3. Write one note equal to the value of the notes preceding it.

   a. \( \frac{2}{4} + \frac{1}{4} = \) \( \frac{3}{4} \)
   b. \( \frac{3}{4} \) = \( \frac{1}{4} \)
   c. \( \frac{4}{4} \) = \( \frac{1}{4} \)
   d. \( \frac{5}{4} + \frac{1}{4} = \) \( \frac{6}{4} \)
Sixteenth Rests

Add another flag to the stem of an 8th rest \( \frac{1}{4} \) and it becomes a 16th REST \( \frac{1}{8} \).

In \( \frac{1}{4} \) time: Two 16th rests equal the duration of one eighth rest. \( \frac{1}{8} \frac{1}{8} = \frac{1}{4} \)

Four 16th rests equal the duration of one quarter rest. \( \frac{1}{8} \frac{1}{8} \frac{1}{8} \frac{1}{8} = \frac{1}{4} \)

In \( \frac{1}{3} \), \( \frac{1}{4} \), and \( \frac{1}{4} \) time:

a 16th rest \( \frac{1}{8} \) is equal to one-quarter count.

1 e & a 2 e & a 3 e & a 4 e & a

A 16th rest is drawn like this \( \frac{1}{8} \). Write six 16th rests.

Exercises

1. Write the counts under the following example. Clap the rhythm.

\[
\frac{1}{4} \quad \frac{1}{4} \quad \frac{1}{4} \quad \frac{1}{4} \\
1 & 2 & e & a 3 & 4 & a
\]

2. Fill in the correct number:
   a. \( \frac{1}{8} = \frac{1}{4} \)
   b. \( \frac{1}{8} = \frac{1}{4} \)
   c. \( \frac{1}{8} = \frac{1}{4} \)
   d. \( \frac{1}{8} = \frac{1}{4} \)

3. Change these 8th notes to 16th notes, then add 16th rests between them.

\[
\frac{3}{4} \quad \frac{3}{4} \quad \frac{3}{4} \quad \frac{3}{4} \\
\]

4. Write the counts under the notes below the staff.

\[
\frac{2}{4} \quad \frac{2}{4} \quad \frac{2}{4} \quad \frac{2}{4} \\
1 & e & a 2 & a
\]

5. Complete the measures below with the appropriate rests. Write the counts under the notes and then clap the rhythm.

\[
\frac{4}{4} \quad \frac{4}{4} \quad \frac{4}{4} \quad \frac{4}{4} \\
1 & 2 & 3 & 4 &
\]
**Dotted Eighth Notes**

Remember: A dot after a note increases its length by one half of its original value.

An 8th note is equal to two 16th notes.

Adding a dot to an 8th note increases its value by half—\( \frac{1}{4} \) beat or a 16th note.

A DOTTED 8TH NOTE is equal to three 16th notes.

\[ \text{\( \cdot \)} = \text{\( \cdot \cdot \cdot \) \( \cdot \)} \]

In 2, 3, and 4 time: a dotted 8th note equals \( \frac{3}{4} \) of a beat.

Here are three ways of writing the same rhythm:

\[ \text{\( \cdot \)} = \text{\( \cdot \cdot \cdot \) \( \cdot \)} \]

A \( \text{\( \cdot \)} \) is usually followed by a \( \text{\( \cdot \)} \).

**Exercises**

1. Write the counts under the following example. Clap the rhythm.

Theme from Farandole

Georges Bizet (1838–1875)

2. Add bar lines to the examples.

a.

b.

3. Complete the measures by adding a note or rest above each arrow.
**Common Time and Cut Time (Alla Breve)**

The time signature \(\frac{4}{4}\) may also be written as \(\frac{4}{4}\), called COMMON TIME. \(\frac{4}{4}\) = \(\frac{4}{4}\)

When a vertical line passes through \(\frac{4}{4}\), it is known as CUT TIME \(\frac{4}{4}\) (or ALLA BREVE). The top and bottom numbers of \(\frac{4}{4}\) are cut in half to \(\frac{4}{4}\).

In the time signatures of \(\frac{4}{4}\) or \(\frac{4}{4}\), \(\frac{2}{2}\) means there are 2 beats per measure.

In \(\frac{2}{2}\) time:

<table>
<thead>
<tr>
<th>Notes</th>
<th>Rests</th>
<th>Beats</th>
</tr>
</thead>
<tbody>
<tr>
<td>(\frac{4}{4}) or (\frac{4}{4})</td>
<td>(\frac{4}{4}) or (\frac{4}{4})</td>
<td>(\frac{2}{2}) beats</td>
</tr>
<tr>
<td>(\frac{4}{4}) or (\frac{4}{4})</td>
<td>(\frac{4}{4}) or (\frac{4}{4})</td>
<td>(\frac{2}{2}) beats</td>
</tr>
</tbody>
</table>

**Exercises**

1. \(\frac{4}{4}\) is known as ________ time.
2. \(\frac{4}{4}\) is known as ________ time or ________.
3. \(\frac{4}{4}\) has ________ beats per measure and the ________ note receives one beat.

4. Complete the measures below. Use \(\frac{4}{4}\) or \(\frac{4}{4}\) notes and \(\frac{4}{4}\) or \(\frac{4}{4}\) rests. Clap the rhythm.

```
\frac{3}{4}
\frac{4}{4}
\frac{4}{4}
\frac{4}{4}
\frac{4}{4}
\frac{4}{4}
\frac{4}{4}
\frac{4}{4}
```

5. In the example below, circle the measures with the incorrect number of beats.

```
\frac{4}{4}
\frac{4}{4}
\frac{4}{4}
\frac{4}{4}
\frac{4}{4}
\frac{4}{4}
\frac{4}{4}
```

6. In the example below, draw bar lines and a double bar. Count and clap the rhythms.
UNIT 11  LESSON 43

3/8 and 6/8 Time Signatures

In 3/8 time:
3 means there are 3 beats per measure.
8 means the 8th note receives 1 beat.

\[ \begin{array}{c}
\text{In 3/8 time:} \\
\text{or } = 1 \text{ beat} \\
\end{array} \]
\[ \begin{array}{cccc}
1 & 2 & 3 & 1 \\
\end{array} \]

\[ \begin{array}{c}
\text{In 3/8 time:} \\
\text{or } = 2 \text{ beats} \\
\end{array} \]
\[ \begin{array}{cccc}
1 & 2 & 3 & 1 \\
\end{array} \]

\[ \begin{array}{c}
\text{In 3/8 time:} \\
\text{or } = 3 \text{ beats} \\
\end{array} \]
\[ \begin{array}{cccc}
1 & 2 & 3 & 1 \\
\end{array} \]

In 6/8 time:
6 means there are 6 beats per measure.
8 means the 8th note receives 1 beat.

In 6/8 time:
\[ \begin{array}{c}
\text{and } \text{ receive the same} \\
\text{number of beats as in 3/8 time.} \\
\end{array} \]
\[ \begin{array}{cccccccc}
1 & 2 & 3 & 4 & 5 & 6 & 1 & 2 & 3 \\
\end{array} \]

In addition, \( \text{ } = 3 \text{ beats} \), \( \text{ } = 6 \text{ beats} \)

Exercises

1. In the examples, circle the measures with the incorrect number of beats.

   a. \[ \begin{array}{c}
   \text{Note} \\
   \text{Rest} \\
   \text{Note} \\
   \text{Rest} \\
   \end{array} \]

   b. \[ \begin{array}{c}
   \text{Note} \\
   \text{Rest} \\
   \text{Note} \\
   \text{Rest} \\
   \end{array} \]

2. Complete the measures, using one note or rest. Write the beats, then count and clap the rhythm.

   a. \[ \begin{array}{c}
   \text{Note} \\
   \text{Rest} \\
   \text{Note} \\
   \text{Rest} \\
   \end{array} \]

   b. \[ \begin{array}{c}
   \text{Note} \\
   \text{Note} \\
   \text{Note} \\
   \text{Rest} \\
   \end{array} \]
§ and § Time Signatures at Fast Tempos

Remember that ½ or C time can be cut in half to § or § time when the composer wants the music to be performed at a fast tempo.

§ and § can also be performed at fast tempos: count each § measure in 1 count and each § measure in 2 counts.

There is a strong beat on 1 in § time and on beats 1 and 4 in § time.

Because the tempo is fast, it is only necessary to count the strong beats.

In fast § time:

\[
\begin{align*}
\text{§} & : \quad \text{or } = \frac{1}{2} \text{ beat} \\
\text{§} & : \quad \text{or } = \frac{1}{3} \text{ beat} \\
\text{§} & : \quad \text{or } = \frac{1}{6} \text{ beat}
\end{align*}
\]

In fast § time:

\[
\begin{align*}
\text{§} & : \quad \text{or } = \frac{1}{2} \text{ beat} \\
\text{§} & : \quad \text{or } = \frac{1}{3} \text{ beat} \\
\text{§} & : \quad \text{or } = \frac{1}{6} \text{ beat}
\end{align*}
\]

Exercises

1. Write the strong beats below the notes in a fast tempo.
   a. §
   b. §

2. Write the correct time signature and the strong beats below the notes in a fast tempo.
UNIT 11  LESSON 45

Eighth Note Triplets

When three notes are grouped together with a figure “3” above or below the notes, the group is called a TRIPLET. The 3 notes are played in the time of 2 notes of the same value. It is similar to playing $\frac{3}{8}$ and $\frac{4}{8}$ at fast tempos.

**8th NOTE TRIPLET**

\[ \begin{array}{c}
\begin{array}{c}
\text{Count: trip- a- let}
1 & \text{&}
\end{array}
\end{array} \]

or: 1 trip-let

\[ \begin{array}{c}
\begin{array}{c}
\text{1 trip-let}
2 & \text{trip-let}
3 & \text{trip-let}
4 & \text{trip-let}
\end{array}
\end{array} \]

March (from the "Nutcracker Suite")

Peter Ilyich Tchaikovsky (1840–1893)

Arabesque No. 1

Claude Debussy (1862–1918)

**Exercises**

1. For each example, add bar lines, write the beats under the notes and clap the rhythm.

   a. \[ \begin{array}{c}
   \begin{array}{c}
   \text{3}
   \end{array}
   \end{array} \]

   b. \[ \begin{array}{c}
   \begin{array}{c}
   \text{3}
   \end{array}
   \end{array} \]

2. Complete the incomplete measures below with eighth note triplets. Count and clap the rhythm.

   a. \[ \begin{array}{c}
   \begin{array}{c}
   \text{3}
   \end{array}
   \end{array} \]

   b. \[ \begin{array}{c}
   \begin{array}{c}
   \text{3}
   \end{array}
   \end{array} \]
Incomplete Measures (Pick-up Notes)

Some pieces begin with an incomplete measure. This note (or notes) is known as a PICK-UP NOTE. The following piece has only 1 beat in the first measure. The missing 2 beats are found in the last measure.

Carnival of Venice
Moderato

Syncopation
When the accent in a musical passage falls on the weak beat (&) rather than the strong beat (1, 2, etc.), it is called SYNCOPATION.

Exercises

1 Fill in the last measure of each example with the correct note value for the given note name.

We Wish You A Merry Christmas
Traditional Carol

Auld Lang Syne
Scottish Folk Song

2 Add bar lines and write the beats under each measure. Count and clap the rhythm.
**Triads**

When three or more notes are sounded together, the combination is called a CHORD. When a 3-note chord consists of a ROOT, a 3rd and a 5th, it is called a TRIAD.

The root is the note from which the triad gets its name. To build a triad, measure the 3rd and the 5th upward from the root.

The root of a C triad is C. When a triad is in ROOT POSITION, it will include every other note (C-E-G, D-F-A, E-G-B, etc.). All the notes will be on lines or all the notes will be in spaces.

Triads may be built on any note of the scale. In the C major scale, the root position triads are:

**Exercises**

1. Build triads using each of the following line notes as the root. Name the root note.

2. Build triads using each of the following space notes as the root. Name the root note.

3. Add two notes (above or below) to create a triad in root position from the given 3rd or 5th. Name the root note.
Primary and Major Triads

The most important triads of a key are built on the 1st, 4th and 5th scale degrees of the major scale. They are called the PRIMARY TRIADS or PRIMARY CHORDS of the key and are identified by the ROMAN NUMERALS I (1), IV (4) and V (5). These three triads contain every tone in the major scale.

The primary triads are MAJOR TRIADS because they consist of the root, a major 3rd and a perfect 5th (see page 56).

There are two other ways of forming a major triad:
1. select the 1st, 3rd and 5th notes of a major scale.
2. add the interval of a minor 3rd (see page 57) on top of a major 3rd.

In the key of C major, the
I triad (or chord) is the C triad (C-E-G).
IV triad (or chord) is the F triad (F-A-C).
V triad (or chord) is the G triad (G-B-D).

The primary triads in the key of C major:

Exercises

1. Build the primary triads in root position for each scale by adding two notes to the 1st, 4th and 5th notes of each scale to complete the triad. Name each triad.

   a. 

   b. 

   c. 

   d. 

2. Write the primary triads in root position for each key. Name each triad.

   a. 

   b. 

   c. 

   d. 
Scale Degree Names

Each tone of a scale can be identified by a name as well as by a numbered scale degree (see page 43). The most important scale degrees are the same as those on which the primary chords are built: 1, 4 and 5. The three most important scale degree names are the Tonic (I), Subdominant (IV) and Dominant (V).

**TONIC (I)**
The keynote of a scale is called the TONIC. It is the lowest and highest tone of the scale. Since the tonic is the 1st scale degree, it is given the Roman numeral I. In C major, C is the tonic note or chord.

**DOMINANT (V) and SUBDOMINANT (IV)**
The tone a 5th above the tonic is called the DOMINANT. Since the dominant is the 5th scale degree, it is given the Roman numeral V. In C major, G is the dominant note or chord.

The tone a 5th below the tonic is called the SUBDOMINANT. Since the subdominant is the 4th scale degree, it is given the Roman numeral IV. In C major, F is the subdominant note or chord. The prefix “sub” means under or below.

**Important!**
The names of scale degrees were derived from an arrangement in which the tonic was the central tone. The subdominant was given its name because it is the same distance below the tonic as the dominant is above the tonic. It is not called subdominant because it is just below the dominant. See bottom staff.

**MEDIANT (III) and SUBMEDIANT (VI)**
The tone a 3rd degree above the tonic (midway between the tonic and the dominant) is called the MEDIANT (a Latin word meaning “in the middle”). Since the mediant is the 3rd scale degree, it is given the Roman numeral III. In C major, E is the mediant note or chord.

The tone a 3rd degree below the tonic (midway between the tonic and the subdominant) is called the SUBMEDIANT. Since the submediant is the 6th scale degree, it is given the Roman numeral VI. In C major, A is the submediant note or chord.

**SUPERTONIC (II) and LEADING TONE (VII)**
The tone a 2nd degree above the tonic is called the SUPERTONIC. Since the supertonic is the 2nd scale degree, it is given the Roman numeral II. In C major, D is the supertonic note or chord. The prefix “super” means over or above.

The tone a 2nd degree below the tonic is called the LEADING TONE - sometimes called the SUBTONIC. Leading tone is most often used since the note has a strong tendency to “lead” to the tonic, as it does in an ascending scale. Since the leading tone is the 7th scale degree, it is given the Roman numeral VII. In C major, B is the leading tone or chord.

In scale degree order, the name and Roman numeral of each scale tone is:

![Scale Degree Diagram](image)

With the tonic being the central tone, the name and Roman numeral of each scale tone is:

![Scale Degree Diagram](image)
The V7 (Dominant 7th) Chord

In many pieces, a V7 (dominant 7th) chord is used instead of a V (dominant) triad. To build a V7 chord, add a minor 7th above the root of the V triad (or a minor 3rd above the 5th). The V7 is a chord and not a triad because it has 4 notes rather than 3.

\[
\text{Dominant } + \text{ minor 7th} = \text{Dominant 7th}
\]

\[
\text{Dominant } + \text{ minor 3rd} = \text{Dominant 7th}
\]

Often, the 5th of the V7 chord is omitted. The V7 chord then would have the same number of tones as the I and IV chords while still retaining the quality of a 7th chord. This also allows the music to be sung or performed by as few as three singers or instrumentalists.

The three primary chords are now I, IV and V7.

Exercises

1. Write the V7 chord for each key. Write the key name and letter name of each chord.

   Key of: C Major

   G7

2. Fill in the missing notes in the following V7 chords. Which interval did you add?

   G7   D7   A7   C7   F7

3. Write the following V7 chords with the 5th omitted—include the accidentals.

   F7   C7   G7   D7   A7
ALLA BREVE see CUT TIME. (p. 65).

AUGMENTED INTERVAL When a perfect or major interval is made larger by one half step (p. 58).

CHORD 3 or more notes sounded together (p. 74).

CHROMATIC INTERVAL When the keynote and the upper note of an interval are not from the same major scale. Minor, diminished and augmented intervals are always chromatic intervals in major keys (p. 58).

CHROMATIC SCALE

A scale made up entirely of half steps in consecutive order. On the keyboard it uses every key, black or white (p. 51).

CIRCLE OF FIFTHS Shows the relationship of one key to another by the number of sharps or flats in the key signature and the order in which the sharps or flats occur (p. 53).

COMMON TIME Indicates the same as the time signature of $\frac{4}{4}$ (p. 65).

CUT TIME $\frac{3}{4}$ cut in half to $\frac{3}{2}$. It indicates there are two beats per measure and the half note receives 1 beat (p. 65).

DEGREES The tones or steps of a scale. There are eight degrees in a major scale (p. 43).

DIATONIC INTERVAL When the keynote and the upper note of an interval are from the same major scale. All diatonic intervals in the major scale are either perfect or major (p. 56).

DIMINISHED INTERVAL When a perfect or minor interval is made smaller by one half step (p. 58).

DOMINANT The tone a 5th above the tonic (p. 76).

DOMINANT 7th CHORD A chord built on the 5th degree consisting of a root, major 3rd, perfect 5th (sometimes omitted), minor 7th (V7) (p. 77).

DOTTED EIGHTH NOTE In time signatures with 4 as the bottom number, it receives $\frac{3}{4}$ of a beat (p. 64).

DOUBLE FLAT lowers a flat note by a half step (p. 58).

DOUBLE SHARP raises a sharp note by a half step (p. 58).

EIGHTH NOTE TRIPLET When 3 eighth notes are grouped together with a figure “3” above or below the notes (p. 70).

ENHARMONIC KEYS Keys and scales that sound the same but are written differently. The keys of C, F, and B sound the same as the keys of D#, G#, and Eb respectively (pp. 50 & 53).

EVEN NUMBERED INTERVALS (2nd, 4th, 6th and octave) Are written from line to space or space to line (p. 52).

PERFECT INTERVAL The interval between the keynote of a major scale and the unison, 4th, 5th or octave of that scale (p. 56).

HARMONIC INTERVAL Two notes sounded together (p. 52).

HARMONY INTERVALS See Pick-up Notes (p. 71).

INCOMPLETE MEASURE See Pick-up Notes (p. 71).

INTERVAL The distance in pitch between two notes (p. 52).

KEYNOTE The note on which a scale begins and ends (p. 43).

KEY SIGNATURE Indicates the notes that will be sharpened or flattened each time they appear. These are placed right after the clef sign (pp. 46 & 47).

LEADING TONE The 7th scale degree (VII) (p. 76).

MAJOR INTERVAL The interval between the keynote of a major scale and the 2nd, 3rd, 6th or 7th of that scale (p. 56).

MAJOR SCALE A scale made up of eight notes—two tetrachords joined by a whole step (p. 43).

MAJOR TRIAD Triad consisting of a root, major 3rd and perfect 5th (p. 75).

MEDIAN The 3rd scale degree (iii) (p. 76).

MELODIC INTERVAL Two notes sounded separately (p. 52).

MINOR INTERVAL When the interval between the two notes of a major interval (2nd, 3rd, 6th or 7th) is decreased by a half step (p. 57).

MOVEABLE DO In Solfege, Moveable Do means the syllables apply to the same scale degrees, regardless of the key. For example, in the key of C, the keynote C is called “do”. In the key of F, the keynote F is also called “do” (p. 59).

ODD NUMBERED INTERVALS (unison, 3rd, 5th and 7th) Written from line to line or space to space (p. 52).

OCTAVE The interval of an 8th (p. 52).

TIME SIGNATURE $\frac{3}{4}$ or $\frac{2}{4}$, $\frac{3}{8}$ and $\frac{6}{8}$ appears at the beginning of a piece of music after the clef sign. It contains two numbers. The upper number tells how many beats are in each measure and the lower number indicates what type of note receives 1 beat (pp. 65, 68, 69).

TONIC The first scale degree or keynote of a scale (I) (p. 76).

TRANSPOSITION When a melody is rewritten with the exact same sequence of notes and intervals into another key (p. 59).

TRIAD A 3-note chord consisting of a root, 3rd and 5th (p. 74).

TRIPLET See 8th note triplet (p. 70).

UNISON The interval between two identical notes (p. 52).