NOTATION, TIME SIGNATURES AND COUNTING METHOD

This unit reviews the fundamentals of music notation (grand staff, clefs, note values, rests and time signatures) and introduces a practical counting method for reading rhythms. Mastery of the counting method through diligent practice should help you to improve your music reading skills.

MUSIC NOTATION

Important facts:

- The musical alphabet uses just the first seven letters of the English alphabet. (A, B, C, D, E, F, G)
- The Treble or G Clef circles the line G on the staff:
  - Names of the lines: E, G, B, D, F (Every Good Boy Does Fine)
  - Names of the spaces: F, A, C, E (spells FACE)

Treble Clef

- The two dots in the Bass or F Clef enclose the F line on the staff:
  - Names of the lines: G, B, D, F, A (Good Boys Do Fine Always)
  - Names of the spaces: F, A, C, E (spells FACE)

Bass Clef

- When the bass and treble staffs are connected by a line and/or a brace, they combine to form the Grand Staff.

---

- **Ledger lines** are used to extend the range of notes either above or below the staff.

  ![Ledger Lines Diagram]

  More than one ledger line may be used to extend the range of the staff.

- The black keys on the piano are the sharps and flats in music, and they are arranged in groups of twos and threes. The note “C” on the piano is always the white key to the left of the lowest note in any pair of black keys. See the Piano Keyboard Illustration below.

![Piano Illustration]

**NOTE PLACEMENT**

Stems extend *downward* on the left side when a note appears on or *above the 3rd line* of the staff.

Stems extend *upward* on the right side when a note appears on or *below the 3rd line* of the staff.

The stem length should continue to the space or line with the same letter name above or below.

![Stem Examples]
NOTE VALUES AND RESTS

<table>
<thead>
<tr>
<th>Notes</th>
<th>Names</th>
<th>Rests</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Whole</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Half</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Quarter</td>
<td>:</td>
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<tr>
<td></td>
<td>Eighth</td>
<td>:</td>
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<tr>
<td></td>
<td>Sixteenth</td>
<td>:</td>
</tr>
<tr>
<td></td>
<td>Thirty-second</td>
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<tbody>
<tr>
<td></td>
<td>Dotted Whole</td>
<td>-</td>
</tr>
<tr>
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<td>Dotted Half</td>
<td>-</td>
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<td>Dotted Quarter</td>
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<td>Dotted Eighth</td>
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<tr>
<td></td>
<td>Dotted Sixteenth</td>
<td>:</td>
</tr>
<tr>
<td></td>
<td>Dotted Thirty-second</td>
<td>:</td>
</tr>
</tbody>
</table>

- A dot after a note or rest increases the time value of that note or rest by one-half of its original value.

\[
\text{\textbullet} = \text{\textbullet} + - \quad \text{\textbullet\textbullet} = \text{\textbullet} + -
\]

TIME SIGNATURES

A time signature consists of two numbers arranged vertically or by some other symbol. The top number tells how many counts or beats there are in each measure; any number may be used. The bottom number tells what kind of note value gets one count: only the following numbers may be used:

\[
1 \quad 2 \quad 4 \quad 8 \quad 16 \quad 32
\]

- In simple time the beat unit is divisible by two. For example, \(\frac{2}{4}, \frac{3}{4}, \frac{4}{4}\) and so on.
- The symbol for \(\frac{4}{4}\) time or common time is C. The symbol for \(\frac{2}{2}\) is C.

- In compound time, the beat is divisible by three. For example, when \(\frac{6}{8}, \frac{9}{8}, \frac{12}{8}\) time signatures are used with fast tempos, the dotted quarter note gets one count. When these time signatures are used with slow tempos, the eighth note gets one count.
COUNTING METHOD

When the quarter note receives one count \(\frac{2}{4}, \frac{3}{4}, \frac{4}{4}\) etc.), use the following measure-wise counting method: (pronounced one-and two-and three-and four-and)

\[
\begin{array}{c|cccc}
\frac{4}{4} & \cdot & \cdot & \cdot & \cdot \\
1 & + & 2 & + & 3 & + & 4 & +
\end{array}
\]

For the four-fold division of the beat (sixteenth notes) and its variations, use 1 e + a. (pronounced one-ee-an-da)

\[
\begin{array}{c|cccc}
\frac{4}{4} & \cdot & \cdot & \cdot & \cdot \\
1 & + & a & 2 & e & + & a & 3 & + & 4 & + & a
\end{array}
\]

The following examples illustrate how to count in time signatures that use the half note or eighth note as the beat unit:

\[
\begin{array}{c|cccc}
\frac{2}{4} \text{ or } \frac{C}{4} & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot \\
1 & + & 2 & + & 1 & e & + & \text{a} & 2 & e & + & \text{a}
\end{array}
\]

\[
\begin{array}{c|cccccccc}
\frac{6}{8} & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot \\
1 & 2 & 3 & 4 & 5 & 6 & 1 & + & 2 & 3 & 4 & 5 & 6 & +
\end{array}
\]

A rhythm triplet occurs in music when three equal note values replace two equal note values.

\[
\begin{array}{c|cccc}
\frac{4}{4} & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot \\
1 & 2 & 3 & 1 & 2 & 3 & 1 & + & 2 & 3
\end{array}
\]

We can count triplets as follows:

\[
\begin{array}{c|cccc}
\text{SLOW} & \frac{2}{4} & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot \\
1 & \text{trip} & \text{let} & 2 & \text{trip} & \text{let}
\end{array}
\]

\[
\begin{array}{c|cccc}
\text{FAST} & \frac{2}{4} & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot \\
1 & + & \text{a} & 2 & + & \text{a}
\end{array}
\]

(Do not confuse \(\cdot \text{ with } \cdot \text{ or } \cdot \) with \(\cdot \text{ with } \cdot \))
NAME: ____________________________

INTERVALS

An interval is the distance between two pitches.

- Two pitches sounded together produce a harmonic interval.
- Two pitches sounded one after another produce a melodic interval.

Intervals are identified by their quality - perfect (P), major (M), minor (m), diminished (d) and augmented (A) and their distance from one another. 1st (prime or unison), 2nd, 3rd, 4th, 5th, 6th, 7th, 8th (octave), etc.

IMPORTANT: While you are in middle school, you will only worry about the distance of an interval NOT its quality.

☞ How to find the distance of an interval:

1. Start with “1 on the lower note.
2. Count each line and space between the notes. The number of the higher note is the name of the interval. (See example below.)

Use what you just learned about intervals to answer the questions below.

What is the interval? Write “M” if it is a melodic interval and “H” if it is a harmonic interval.

---

NAME: ____________________________

It is important for you to be able to identify intervals so that when you see them in your music, you know what they are. It is even more important for you to know what each interval sounds like so that when you hear it, you can play it in tune!

One the best ways to learn how to hear intervals is to practice playing them! Be sure to add this interval exercise to your daily practice routine.
MAJOR SCALES

A major scale is a sequence of 8 notes in ascending and descending order. (They move alphabetically going up and down.) Like a “musical ladder,” each step is the next consecutive note in the key.

Example ~ C Major Scale: C D E F G A B C  
*This 8 note distance between notes is an interval of an octave.*

There are 12 different major scales. Scales provide composers with the tonal building blocks used in the composing of melodies and harmonies. Singers sometimes use syllables “do re mi fa sol la ti do” to sing a scale.

\[
\begin{array}{cccccccc}
  & \text{do} & \text{re} & \text{mi} & \text{fa} & \text{sol} & \text{la} & \text{ti} & \text{do} \\
 1 & \bullet & \bullet & \circ & \bullet & \bullet & \circ & \circ & \bullet \\
 2 & \bullet & \bullet & \bullet & \bullet & \circ & \circ & \circ & \bullet \\
 3 & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet \\
 4 & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet \\
 5 & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet \\
 6 & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet \\
 7 & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet \\
 8 & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet \\
\end{array}
\]

REVIEW QUESTIONS:

1. Write the letters alphabetically for each scale below. The 1st letter has been given.
   - C ___ ___ ___ ___ ___ ___ ___ 
   - B ___ ___ ___ ___ ___ ___ ___ 
   - A ___ ___ ___ ___ ___ ___ ___ 

2. A major scale is made up of _________ notes.

   (number)

3. A scale moves ______________________________ by step.

4. A scale moves from a note with one letter name to a note 8 notes higher with the
   _________  _________  ______________________________.

5. The 8 note distance or interval is called an __________________________.

6. The syllables sometimes used by singers for a scale are:
   _______ _______ _______ _______ _______ _______ _______. 
WHOLE STEP & HALF STEPS FORMULA

The distance between two notes is called an interval.
- A half step is the smallest distance from one not to the next with no possible notes in between. The two notes are close neighbors
- A whole step interval happens when there is room for one note between notes.

The piano keyboard is a good way to see half and whole steps. All notes are counted in intervals, including black and white keys. Black keys are sharp & flat notes.

*Notice that half steps occur automatically between B & C and E & F. This is because there are no black keys in between.*

![Piano Keyboard Diagram](image)

### REVIEW QUESTIONS:

1. Write “whole step” or “half step.”

   - C to D ______________ _step
   - E to F ______________ _step
   - G# to G ______________ _step
   - Db to D ______________ _step

2. The distance between 2 notes is called an _________________.

3. A ______________ _____________ has not room for a note in between.

4. A ______________ _____________ does have room for a note in between.

5. Half steps happen automatically between notes _______ & _______ and between _______ & _______.
MAJOR SCALES
HALF STEP/WHOLE STEP FORMULA

Scales are always written by using a special half step and whole step formula.

The major scale formula is:

| whole | whole | half | whole | whole | whole | half |

A half step is marked with a sign like this: 

**IMPORTANT:** The half steps in a Major Scale always occur between the 3rd and 4th note of the scale AND the 7th and 8th note of the scale.

**REVIEW QUESTIONS:**

1. On the staff below, practice writing a scale in whole notes starting on C. Be sure to draw your clef at the beginning of the staff.

2. Write the number for each note (1 through 8) of the scale under each note.

3. Circle the 3rd & 4th notes together, and the 7th & 8th notes together where half steps occur.

**EXTRA CREDIT:** Now that you know the arrangement or pattern for a major scale, you should be able to build that scale beginning on any note on your instrument. Using the above information, complete the following tasks:

   A. On the staff below, construct two major scales in whole notes. Don't forget to write in your accidentals BEFORE the note but AFTER the letter name.
   B. Write the names of the notes in between the two staffs. The 1st note is given for you.

Use this staff if you read treble clef.

Use this staff if you read bass clef.
Match the Key Signature

Draw a line from the Key Signature on the left to the Major Scale name on the right.

1. \( \text{C Major} \)
2. \( \text{E}_b \text{ Major} \)
3. \( \text{D}_b \text{ Major} \)
4. \( \text{B}_b \text{ Major} \)
5. \( \text{A Major} \)
6. \( \text{D Major} \)
7. \( \text{A}_b \text{ Major} \)
8. \( \text{G Major} \)
9. \( \text{B Major} \)
10. \( \text{F Major} \)
11. \( \text{E Major} \)
Draw the missing notes of each major scale. If the name of the scale is not listed, fill in the name of the scale at the beginning.
See - Sawing Rhythms

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Add the notes and rests together on each end of the see-saw. Fill in each blank with the correct number of beats added together. Circle the side of the see-saw with the largest number of beats.

Name _______________________________________

Date _______________________________________

_________  ________  ________  ________

_________  ________  ________  ________

_________  ________  ________  ________
1. Add a note to complete the measures with the correct counts.

2. Add a note to complete the measures with the correct counts.

3. Cross out the note that makes each measure have an incorrect number of counts.

4. Cross out the note that makes each measure have an incorrect number of counts.

5. Write two measures of music in 3/4 time.

6. Write two measures of music in 4/4 time.

7. Write two measures of music in 2/4 time using quarter and half notes.

8. Write two measures of music in 4/4 time using whole, half, or quarter notes.

9. Write the C Major Scale in order using quarter notes. Write this in the Treble and Bass Clef.

10. Write two measures of music in 4/4 time using whole, half, or quarter notes and using notes in the C Major Scale. Copy your Treble Clef notes to the Bass Clef.

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Draw in the correct bar lines to complete the notation below:

\[ \text{\( \frac{3}{4} \)} \]

\[ \text{\( \frac{4}{4} \)} \]

\[ \text{\( \frac{5}{4} \)} \]

Draw in the notes, rests and rhythms to correctly complete each measure below.
(Each measure should add up to 4 beats using notes and rests.)

\[ \text{\( \frac{3}{4} \)} \]

\[ \text{\( \frac{4}{4} \)} \]

\[ \text{\( \frac{5}{4} \)} \]
**Skips, Steps and Repeats**

Name: _____________  
Date: _____________

Notes that move from a space up to the next line or from a line up to the next space **STEP UP**.

Notes that move from a space down to the next line or from a line down to the next space **STEP DOWN**.

Notes that move from a space up to the next space or from a line up to the next line **SKIP UP**.

Notes that move down from a space to the next space or from a line down to the next line **SKIP DOWN**.

Notes one after another that stay the same are notes that **REPEAT**.

Fill in the correct answer in the blank below each measure....Skip Up or Down, Step Up or Down, or Repeat

Write the note on the staff to complete each measure.
Beginning Melodic and Harmonic Intervals

An interval is the distance between two notes.
The distance between notes played **separately** make up a melodic interval.

The distance between notes played **together** make up a harmonic interval.

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Melodic and Harmonic Intervals

The distance between notes played separately make up a melodic interval. Add another half note to make a melodic interval higher.

Add another half note to make a melodic interval lower.

The distance between notes played together make up a harmonic interval. Add another whole note to make a harmonic interval higher.

Add another whole note to make a harmonic interval lower.
Add another half note to make a melodic interval of a 4th or 5th higher.

Add another whole note to make a harmonic interval of a 4th or 5th higher.
Half Step Highlights

A half step is the distance from one note to the next key beside it...(or, the smallest interval used which is equal to the distance between two adjacent notes.)

<table>
<thead>
<tr>
<th>Name</th>
<th>____________</th>
</tr>
</thead>
</table>
| "F" | "F Sharp"
| B | C
| A | A Flat | C | C Sharp |

Write the note in the blank that is one half step higher. Draw the note on the staff.

| _____ | F# | E | G |
|_____ |____ |____ |____ |

Write the note in the blank that is one half step lower. Draw the note on the staff.

| G | _____ | B Flat | E Flat | C |
|____ |____ |____ |____ |____ |

Write the note in the blank that is TWO half steps lower. Draw the note on the staff.

| A | _____ | C | E | G |
|____ |____ |____ |____ |____ |

Write the note in the blank that is TWO half steps higher. Draw the note on the staff.

| B | _____ | A | E Flat | A Flat |
|____ |____ |____ |____ |____ |
Transposition is the process of re-writing a piece of music in a different key. The line below is written in the key of C Major.

Each note below was transposed an interval of a perfect 5th higher from the notes above. The line below is now in the key of G Major.

The music below is in the key of C Major.

Using the notes above, transpose the line of notes to F Major, a perfect 4th higher.

Transpose the notes below up a Major 2nd, to G Major.
Match the Symbols

Open this file using Sibelius Software. Drag the symbols to their proper boxes.

- Whole-note
- Half note
- Quarter Note
- Eighth Note
- Forte
- Piano
- Bass clef
- Treble Clef
- Sharp
- Flat
- Crescendo
- Decrescendo

Add or subtract the problem, then drag the symbols to their proper boxes.

- $1 - 1/2 =$
- $3 - 2 =$
- $6 - 2 =$
- $1 + 1 =$
- $5 - 3 =$
- $8 - 4 =$
- $4 - 2 =$
- $3 + 1 =$

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A SLUR is a curved line connecting two or more notes with different pitches, indicating to play the music smoothly.

A TIE is a curved line connecting two notes of the same pitch, indicating to play them as a single note.

Circle the term below that indicates a tie or slur in the measures on the right.

1. TIE / SLUR

2. TIE / SLUR

3. TIE / SLUR

4. TIE / SLUR

5. TIE / SLUR

6. Draw a TIE between two notes of the same pitch.

7. Draw a TIE between two notes of the same pitch.

8. Draw a SLUR between notes with different pitches.

9. Draw one SLUR between notes with different pitches in the treble clef and one SLUR in the bass clef.

10. Draw one TIE between two notes of the same pitch in the treble clef and one TIE in the bass clef.
Find the answer by completing the maze. After completing the maze, color in the boxes that you land on to see the answer.

I am a famous composer of ragtime music. One of my most famous compositions is the "Entertainer." I am Scott.