Intervals

An interval is the distance between two notes. This distance may be described by determining the intervals size (the general aspect) and the interval's quality (the specific aspect).

The **general interval** is obtained by simply counting the number of letter names from one pitch to another. Be sure to count the pitch you begin with as 1. For example, consider the following:

**EXAMPLE 1**

In each of the above measures the general interval is a 3rd. Any kind of C (C, C#, Cb, etc.) to any kind of E (E, E#, Eb, Ebb, etc) will be a 3rd. This is the case because the number of LETTER NAMES from C to E is 3 (count: C=1, D=2, E=3). The fact that the C or the E may be sharped or flattened is inconsequential in determining the general interval.

Here are a few more examples of general intervals:

**EXAMPLE 2**

The **specific interval** determines the interval's quality. There are four most frequent qualities: Major, minor, diminished, and Augmented.

One way to find the specific interval is to compare the interval to those intervals found in the major scale (see example 2). The distance from the tonic note to each note above the tonic in the major scale creates either a major or perfect quality. Memorize these intervals:
Once the previous intervals have been memorized, learn the following two charts (example 3). These charts may be used to find how the interval's quality changes as the pitches are altered from those of the major scale.

**EXAMPLE 3**

<table>
<thead>
<tr>
<th>CHART A</th>
<th>CHART B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use with the general intervals 2,3,6,7 of a major scale</td>
<td>Use with the general intervals 1,4,5,8 of a major scale</td>
</tr>
<tr>
<td>(b) (b) (#)</td>
<td>(b) (#)</td>
</tr>
<tr>
<td>(d -- m -- M -- A)</td>
<td>(d -- P -- A)</td>
</tr>
</tbody>
</table>

In these charts, the accidentals above should be interpreted NOT NECESSARILY as notes that have sharps or flats modifying them, but rather as follows:

- \(\flat\) = the interval found in the major scale compresses two half steps
- \(b\) = the interval found in the major scale compresses one half step
- \(\#\) = the interval found in the major scale expands one half step

If the interval in question is a unison (1), 4th, 5th, or octave (8), use CHART B. If the interval in question is a 2nd, 3rd, 6th, or 7th, use CHART A. For example, the general interval for the following interval is a 3rd (count: D=1, E=2, F=3).

But what kind of 3rd? Since CHART A includes the 3rd, use it to determine the quality. Now you must already know that D-F# is a major 3rd (M3) from your study of key signatures and major scales. In CHART A, play the D-F# into the "M" position. What happens when the interval D-F# becomes D-F? The answer is that the interval compresses one half step (moves to the left on the chart) and becomes a minor 3rd (m3). Read the chart like this:

\[
\begin{align*}
\text{CHART A} & \quad \text{CHART B} \\
\| & \| \\
\begin{array}{c}
\text{d} -- \text{m} -- \text{M} -- \text{A} \\
\text{(m3)}
\end{array} & \\
\begin{array}{c}
\text{d} -- \text{P} -- \text{A} \\
\text{(m3)}
\end{array}
\end{align*}
\]

The notes for each of these qualities for the above example would be:

\[
\begin{align*}
\text{CHART A} & \quad \text{CHART B} \\
\| & \| \\
\begin{array}{c}
\text{d} -- \text{m} -- \text{M} -- \text{A} \\
\text{(m3)}
\end{array} & \\
\begin{array}{c}
\text{d} -- \text{P} -- \text{A} \\
\text{(m3)}
\end{array}
\end{align*}
\]

It should be clear from this example that the accidentals above the qualities are NOT the same as the actual accidentals that modify each pitch in the music. For example, D-F is a minor 3. F in this case is not F flat, but F natural.
The next example uses CHART B. What is the following interval:

Since the general interval in this example is a 4th (count: F=1, G=2, A=3, B=4), use CHART B for finding the interval's quality (specific interval). You must know that the F major scale contains an interval of a perfect 4th (P4) from F to Bb. So, plug F-Bb into the "P" slot. The "d" slot should then compress the interval to F-Bbb. The "A" slot should then expand the interval to F-B natural, the interval we are trying to find. F-B is therefore an augmented 4th (A4).

The notes for each of these qualities for the above example would be:

It should be noted that there is no such interval as a major 4th, or minor 4. When perfect intervals are compressed one half step they become diminished.

Also note that any interval may be theoretically compressed or expanded infinitely. A diminished interval compressed one half step becomes doubly diminished. A doubly diminished interval compressed one half step becomes triply diminished, and so on. Likewise, an augmented interval expanded one half step becomes doubly augmented. A doubly augmented interval expanded one half step becomes triply augmented, and so on (example 4).

EXAMPLE 4

The interval is: dd3   d3   m3   M3   A3   AA3   AAA3   AAAA3