

Intervals (handout no. 1 of 3)

An interval is any pair of pitches.* Intervals are identified by **size** and **quality**.

Size is simply the total number of letter-names an interval spans, **including the two pitches themselves**. C to E (ascending) spans three letters, C-D-E, so it is a third. C up to F, C-D-E-F, is a fourth, and so on. This is the same as the total number of lines and spaces the interval spans on the staff, again counting both “endpoints”. However, the interval from a pitch to the same pitch, such as when two people are singing the same note, is called a unison (not a “first”).

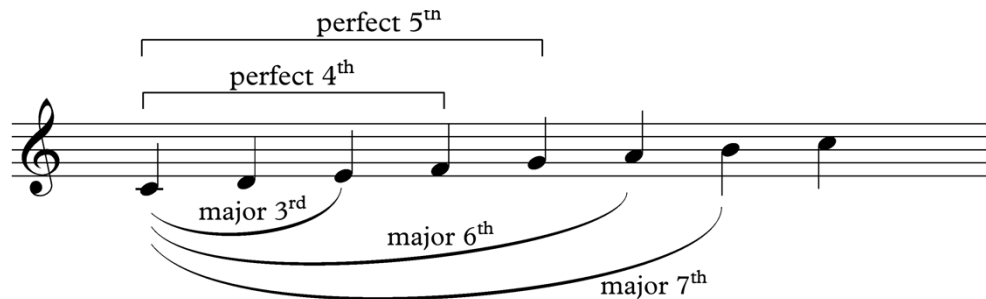
Quality refines an interval name to indicate its exact sound. It is a modifier (major, minor, perfect, diminished, or augmented) that identifies an interval more precisely. For example, C-E and C-E \flat are both thirds, but C-E is a major third and C-E \flat is a minor third.

Intervals come in two categories as regards qualities: those intervals that have a **perfect** form, and those that have **major/minor** forms.

Intervals that may be **perfect** are unisons, fourths, fifths, and octaves.

Intervals that may be **major or minor** are seconds, thirds, sixths, and sevenths.

There are several ways to learn interval qualities. The S2S textbook, unfortunately, focuses on the most unwieldy and error-prone method, simply because it is easy to state and memorize, namely: The interval from the tonic of a major scale **up** to any other note in the major scale is either the **major or perfect** form of each interval.



There are **multiple problems** with using this major-scale factoid as your go-to method for identifying or constructing interval qualities. (I will point these out in class.) However, you can use it as a reference to observe (or recall) the number of whole or half steps in each interval:

- major second: 2 half steps (1 whole step)
- major third: 4 half steps (2 whole steps)
- perfect fourth: 5 half steps, or 2 W + 1 H
- perfect fifth: 7 half steps, or 3 W + 1 H
- major sixth: 9 half steps, or 4 W + 1 H
- major seventh: 11 half steps, or 5 W + 1 H

You are already familiar with major and minor thirds, and with major, minor, and augmented seconds. The rest of this first handout focuses on fourths and fifths. We will cover sixths and sevenths in future handouts, as well as the concepts of **inversion** and **compound intervals**.

* More properly, an interval is the ratio of the vibration frequencies of two pitches. But musicians usually think of it as the melodic “distance” between two pitches, or the harmonic sonority the two pitches make played together.

Reckoning quality of fourths and fifths

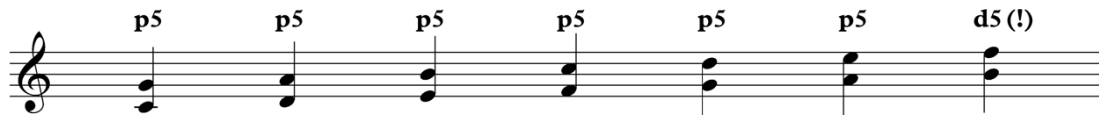
First, we need to define **diminished** and **augmented** forms of perfect intervals:

When a 4th or 5th is a **chromatic half-step smaller** than its perfect form, it is **diminished**.
 When a 4th or 5th is a **chromatic half-step larger** than its perfect form, it is **augmented**.

For example, C up to G is a perfect fifth (7 half steps). C to G \flat (6 half steps) is a diminished fifth; C to G \sharp (7 half steps) is an augmented fifth.

But you don't want to be counting half steps to determine interval quality! This is even worse than the major-scale method for reckoning intervals. Instead, note the following fact:

All the natural-note fifths are perfect, except for the one fifth B-F, which is diminished.



From here, it is easy to determine the quality of any fifth:

If **both** notes are sharped, the fifth quality is unchanged; likewise if both notes are flatted.

If the **lower** note (only) is **sharped**, the interval is a half-step smaller; a perfect fifth would become diminished. The same is true if only the **upper** note is **flatted**.

If the **lower** note is **lowered** or the **upper** note is **raised**, the fifth becomes augmented.



Always remember the special status of the fifth **B-F!**



The situation is analogous with natural-note **fourths**:

All natural-note fourths are perfect, except for the one fourth F-B, which is augmented.



Again, you can go from this simple fact to reckon the quality of any fourth...but you have to remember the special status of B-F (or F-B)!