

# Interval Names and Qualities

The distance from Do (Tonic) to any scale degree is the number of that scale degree: e.g. Do to Re is a 2nd, Do to Mi is a 3rd, etc.

Scale Degree: 1                      2                      3                      4                      5                      6                      7                      8

The number of half-steps or semitones comprising an interval determines the quality of that interval. The number of scale degrees is the numeric value of the interval.

There are two classes of intervals: Perfect and Imperfect.

The perfect intervals are the Unison, Fourth, Fifth, and Octave.  
The imperfect intervals are the Second, Third, Sixth, and Seventh.

Perfect intervals come in three qualities: perfect (P), augmented (A), and diminished (d).  
Imperfect intervals come in four qualities: major (M), minor (m), augmented (A), and diminished (d).

Another way of looking at this is that imperfect intervals are either major or minor, perfect intervals are just perfect, and every interval can have accidentals to make it augmented or diminished.

A second is two scale degrees including the initial pitch.  
0 half-steps makes the second diminished (d2),  
1 half-step makes the second minor (m2),  
2 half-steps makes the second major (M2), and  
3 half-steps makes the second augmented (A2).

A third is three scale degrees including the initial pitch.  
2 half-steps makes the third diminished (d3),  
3 half-steps makes the third minor (m3),  
4 half-steps makes the third major (M3), and  
5 half-steps makes the third augmented (A3).

A sixth is six scale degrees including the initial pitch.  
7 half-steps makes the sixth diminished (d6),  
8 half-steps makes the sixth minor (m6),  
9 half-steps makes the sixth major (M6), and  
10 half-steps makes the sixth augmented (A6).

A seventh is seven scale degrees including the initial pitch.  
9 half-steps makes the seventh diminished (d7),  
10 half-steps makes the seventh minor (m7),  
11 half-steps makes the seventh major (M7), and  
12 half-steps makes the seventh augmented (A7).

A unison is 1 scale degree: the initial pitch.  
0 half-steps makes the unison perfect (P0), and  
1 half-steps makes the unison augmented (A0).  
There is no diminished unison since it is identical to the descending augmented unison.

An octave unison is 8 scale degrees including the initial pitch.  
11 half-steps makes the octave diminished (d8),  
12 half-steps makes the octave perfect (P8), and  
13 half-steps makes the octave augmented (A8).

A fourth is 4 scale degrees including the initial pitch.  
4 half-steps makes the fourth diminished (d4)  
5 half-steps makes the fourth perfect (P4), and  
6 half-steps makes the fourth augmented (A4).

A fifth is 5 scale degrees including the initial pitch.  
6 half-steps makes the fifth diminished (d5)  
7 half-steps makes the fifth perfect (P5), and  
8 half-steps makes the fifth augmented (A5).

Notice that the number of half-steps in diminished imperfect intervals is equivalent to the number of half-steps for the next smallest perfect interval or major imperfect interval. For example, the d2 is the same number of half-steps (0) as the P0, likewise the d3 is the same number of half-steps (2) as the M2 and so forth. The inverse is true for augmented imperfect intervals and the subsequent perfect or minor imperfect interval (e.g. the A6 is the same number of half-steps (9) as the m7).

In fact, the only two augmented/diminished intervals that do not have an enharmonic perfect/major/minor form are the A4 and d5 which are equivalent to each other. These two intervals are the two forms of your 'favorite' sound, the tritone. Thus, for all augmented/diminished intervals (except the tritone) you can make the interval easier to sing by re-writing it as a perfect, major, or minor interval.