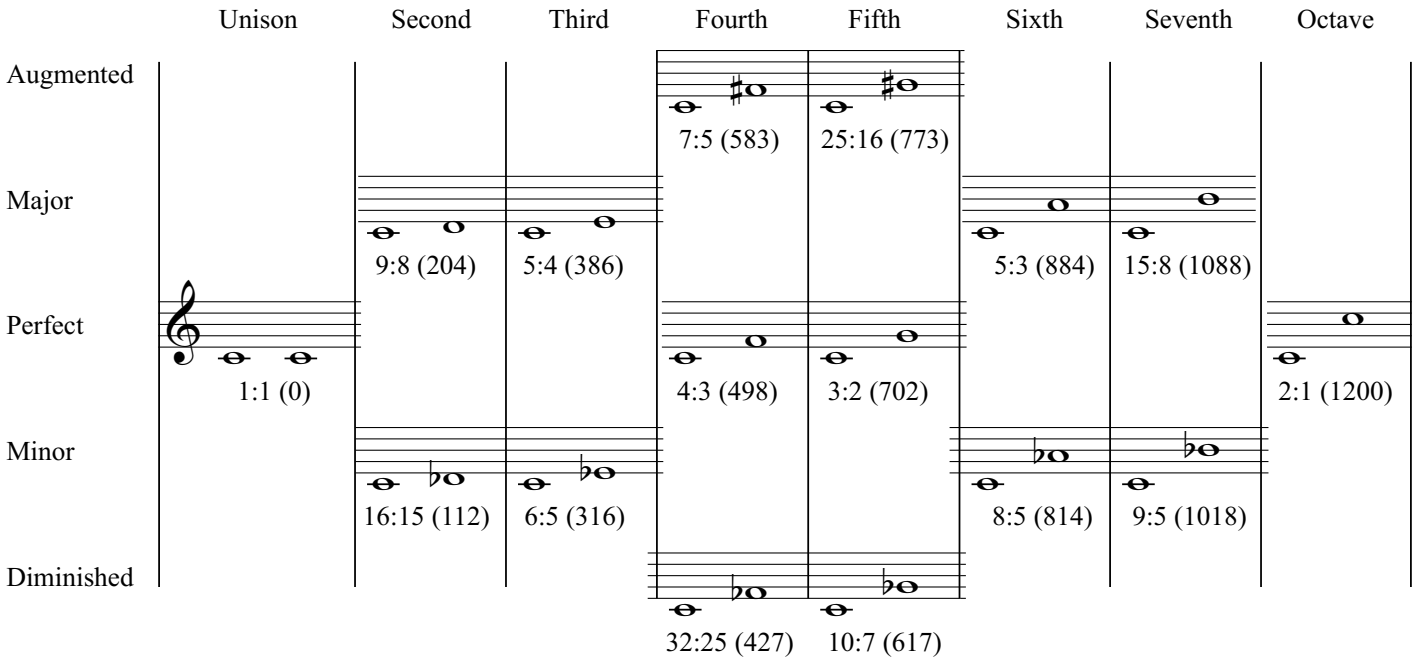
Making "Cents" of Interval Tunings

Measuring Qualities and Ratios



The ancient Greeks sought to understand the ratios between pitches in the scale. Men like Pythagorous, whom you'll remember from algebra and geometry studied the ratio of pitch frequencies to determine which frequencies created the most logical and beautiful tuning system. The simpler ratios are the easiest to sing while the larger ratios are the most challenging and least stable. Intervals are mathematically measure using a logarithmic unit called *cents* equivalent to a hundredth part of a semitone (the technical term for a half-step).

The ratios above reflect 'Just Temperament' which is the tuning system used when singing *a cappella* (without accompaniment).
The numbers in parenthesis reflect the number of *cents* from the starting pitch rounded to the nearest integer.

The number of cents used in 'Equal Temperament' (the tuning system used by many instruments, most notably the piano) are expressed below.