

Interval Inversion

DIATONIC DISTANCES

SUM = 9

Specific:	P1 <-> P8	M2 <-> m7	M3 <-> m6	P4 <-> P5	P5 <-> P4	M6 <-> m3	M7 <-> m2	A4 <-> d5
Generic:	1 8	2 7	3 6	4 5	5 4	6 3	7 2	4 5

CHROMATIC DISTANCES

SUM = 12

Semitones:	0	12	2	10	4	8	5	7	7	5	9	3	11	1	6	6
------------	---	----	---	----	---	---	---	---	---	---	---	---	----	---	---	---

RATIOS

SUM = 1200 cents

Ratio:	1/1 <-> 2/1	3/2 <-> 4/3	5/4 <-> 8/5	6/5 <-> 5/3	9/8 <-> 16/9	15/8 <-> 16/15	45/32 <-> 64/45
Cents:	0 1200	702 498	386 814	316 884	204 996	1088 112	590 610

Calculation:

$$\frac{3}{2} * \frac{4}{3} = \frac{12}{6} = \frac{2}{1}$$

By definition, there are 1200 cents in an octave. The following formula may be used to convert a frequency ratio (f_1/f_2) to cents (c):

$$c = 1200 \log_2 (f_1/f_2)$$

You can use my Web app *Ratio to Cents* to convert a frequency ratio to cents. It is available online at:

Reginald Bain, *Ratio to Cents*
<https://reginaldbain.com/atmi12 rtc/>