

6.12 Interval Vectors

Basic Definitions

An **interval class** refers to the number of half steps in an interval.

If the interval is larger than an octave (i.e., a compound interval), reduce it to a simple interval (<octave).

If the interval is larger than 6 half steps (tritone), invert it at the octave.

Enharmonic spellings are not a consideration here, only the number of half steps.

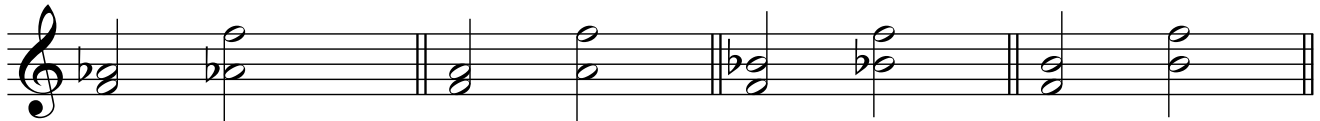
An **interval vector** is a catalog of the interval classes present in a given sonority.



Interval class 0
(Not included in vector)
0 or 12 half steps

Interval class 1
1 or 11 half steps

Interval class 2
2 or 10 half steps



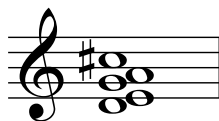
Interval class 3
3 or 9 half steps

Interval class 4
4 or 8 half steps

Interval class 5
5 or 7 half steps

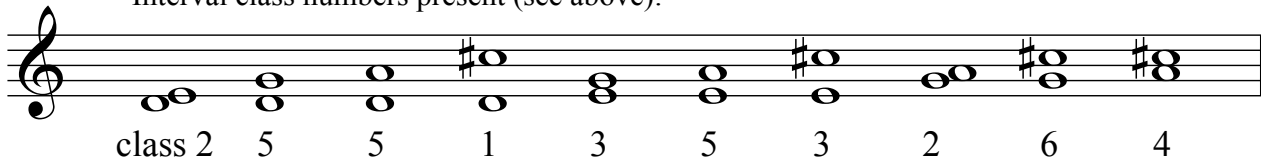
Interval class 6
6 half steps

Sample interval vector example



Given sonority

Interval class numbers present (see above):



Adding up, we have **1** interval class 1, **2** interval class 2 intervals, **2** interval class 3 intervals, **1** interval class 4 interval, **3** interval class 5 intervals, and **1** interval class 6 interval.

So the interval vector for the given sonority is [122131].