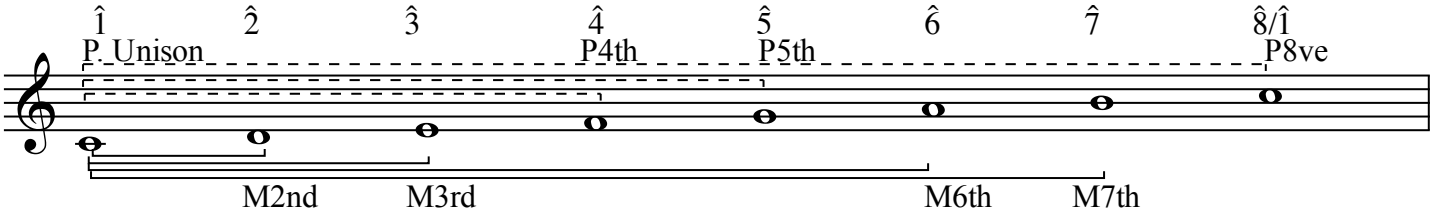
MUS125 Intervals:
Interval Recipes:
Quick and EasyMajor Scale Method
to Determine the Quality of an Interval

We are measuring a spatial relationship when we discuss intervals. For written theory, we are not concerned with the sounding pitches of the interval but the way it LOOKS.

We will use the major scale as our frame of reference for figuring out the intervals, as all major scales use the *same intervallic distance* in the formula.

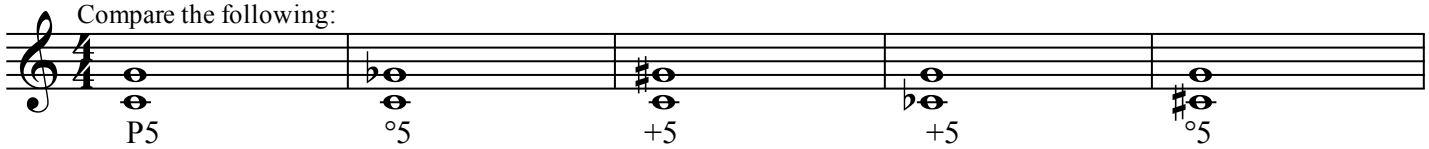
P=Perfect, and includes Unisons, 4th, 5th, and 8ves.
M=Major, and includes the 2nd, 3rd, 6th and 7th

=These interval numbers are coincidently scale degrees in the major scale



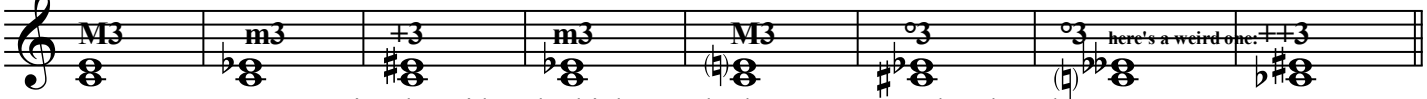
We have two systems of augmentation and diminution, the perfect systen and the major/minor system.

1. The Perfect System = Perfect intervals, P1,P4,P5 &P8, become augmented or diminished when altered by half step.
Compare the following:



Notice that EITHER of the two notes can be altered to affect the interval QUALITY, but the interval QUANTITY Stays the same (it remains a 5th of some kind because we are counting the note NAMES: C,D,E,F,G = 5 notes)

2. The **Major/minor System** = intervals of a 2nd, 3rd, 6th &7th. Here is where it can get confusing.
A **major interval** is made smaller by half step which then results in a minor interval. A major interval may be made larger by half step to become augmented.
A **minor interval** may be made smaller by half step resulting in a diminished interval, or it can be made larger by half step and become major.

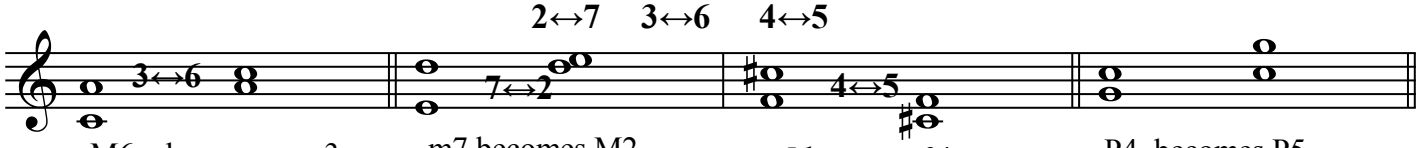


Notice that either the higher or the lower note can be altered!

Inversions of Intervals

We must remember to invert BOTH the number and the quality when doing inversions.
An inversion is the substitution of a higher tone for a lower one and vice versa.

2↔7 3↔6 4↔5



M6 becomes m3
M becomes m and vice versa

m7 becomes M2
m becomes M and vice versa, **2↔7** and **7↔2**

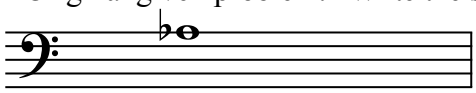
+5 becomes °4
+ becomes °
and vice versa

P4 becomes P5
Perfect remains perfect when inverted

Recipe for Writing an Specified Interval Below a Given Pitch:

As long as we are asked to give an interval ABOVE a specified pitch all goes smoothly.
It is when we are asked to determine an interval BELOW an existing note that the trouble begins.
Yes, one may count backwards if one wishes, but the caveat is,
that one must remain cognizant of the spatial relationship, and remember to keep one's place.
This problem is greatly reduced if we use the power of inversion to determine the lower note,
and this also reveals a handy way to check the answer as well.

Original given problem: "Write the specified interval below the given pitch."



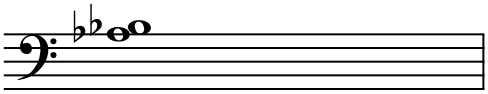
m7↓

***Step 1: INVERT** the question so we use the GIVEN note as the lower note using the power of inversion.

M2 ↑

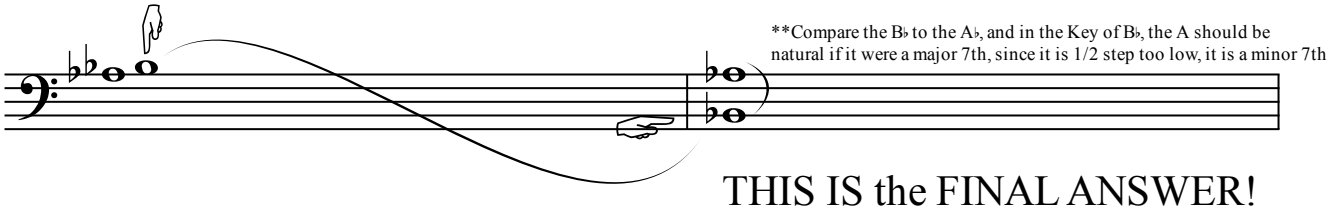
Invert the number, the quality and the direction, resulting in.....a M2 ↑ instead of a m7↓

***Step 2. SOLVE** the inverted question counting UP in the major scale pretending to be in the key of the given note.



Result? A M2↑ above A♭ is scale degree $\hat{2}$, or the note B♭ in the A♭ major scale.

***Step 3. CONVERT** your answer down one octave so that it is BELOW the originally specified note



THIS IS the FINAL ANSWER!

Now check answer by comparing from the bottom note to the higher note.
We stay in the major scale key of the lower note.
A♭ is a m7th above B♭, and B♭ is a m7th below an A♭.