

NAME:

1. **Reading Material “Music and Math”** (can be found on the school website on our class homework page).
2. **Mathematically, a music interval can be identified by a ratio of frequencies of the two corresponding sounds. What simple ratios correspond to the *perfect intervals*?**
3. **Using a table from Slide #4 of the Reading Material and frequency ratio for an octave, calculate frequency of the following notes:**
 - a. **A5 (one octave *higher* than A4)**
 - b. **G2 (one octave *lower* than G3)**
4. **Make a guess: what small integer ratio would describe a *major third* (4 semitones or half-steps)?**
5. **Using a table from Slide #4 (and Slide #5 for extra help) of the Reading Material, check your guess by calculating frequency ratio for the following major thirds:**
 - a. **E3 and C3**
 - b. **A4 and F4**
 - c. **B3 and G3**

(first, divide the frequency of the top note by the frequency of the bottom note; next, round to the nearest hundredths; now, think what small integer ratio gives you approximately the same decimal; remember, it should be something OTHER than 2:1, 3:2 or 4:3 but still very simple!)