SCIENCE TWO ONLINE 2025/2026 **HOMEWORK #9**

NAME:

1. **Reading Material "Music and Math"** (can be found on the school website on our class homework page or use the direct link in the Google Classroom).

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!)