

Math and Music Worksheet
Math 101

Name _____
Date _____

Work through the Math and Music PowerPoint Presentation on the class website:
<http://virtual.mjc.edu/sandersb/> Using the presentation as a resource, answer each of the following questions.

1. A woman is playing a banjo.
 - a. What generates the sound (be specific – what part)?
 - b. What makes the sound resonate?
2. A boy is making “music” by banging on an upside down garbage can
 - a. What generates the sound (be specific – what part)?
 - b. What makes the sound resonate?
3. One bell plays a low D note. Another bell is just half as big.
 - a. What note will it play?
 - b. In a complete sentence, describe how the sound of the little bell will differ from the big one?

4. Suppose a guitar string is under 40 pounds of tension and plays an E note. Another identical guitar string of the same length is under 80 pounds of tension.
 - a. What note will it play? _____
 - b. In a complete sentence, describe how the sound of the higher tension string will differ from the lower tension one?

Bonus Activity #1 – Find my mistakes in the frequency part of the PowerPoint! (See instructions at end of worksheet.)

5. Suppose you have two guitar strings – both the same diameter and under the same tension, however they have different lengths. The short string plays a B note. The longer string is twice as long as the short one.
 - a. What note will it play?
 - b. In a complete sentence, describe how the sound of the longer string will differ from the shorter one?