

NAME:

1. To answer the questions in this homework you need to review Lectures 18 and 19 (all about sound waves). Always show your work where appropriate!

2. Refer to Slide #2 of Lecture 18. What kind of wave is sound?

3. Refer to Slide #5 of Lecture 18. How many vibrations per second does the *lowest pitch typically audible by humans* have?

4. Refer to Slides ##2-3 of Lecture 19:
 - a. What is the difference in the intensity of sound (in db) between a *normal conversation and a loud rock concert*?

 - b. What is the corresponding sound energy difference?

5. How long will it take for a sound wave to travel 1 mile (about 1.6 km) *in the air*?

6. Suppose you could yell “Hello!” underwater 😊. At least how far away an underwater mountain must be to produce a clear echo?