

WAVES EXERCISES

Answer the following questions in your science notebook and tape this handout in your notebook, also. Use complete sentences and show all of you math calculations.

1. If we double the frequency of a vibrating object, what happens to its period?
2. If the frequency of a sound wave is doubled, what change occurs in its speed? What changes occur in its wavelength?
3. You dip your finger repeatedly into a puddle of water and make waves. What happens to the wavelength if you dip your finger more frequently?
4. A skipper on a boat notices wave crests passing his anchor chain every 5 seconds. He estimates the distance between wave crests to be 15 meters. He also correctly estimates the speed of the waves. What is this speed?
5. A sound wave travels through air at 343 m/s with a frequency of 10^2 Hz.
 - a. What is its wavelength?
 - b. What is its period?
6. A string carries a wave with a velocity of 285 m/s. If two waves travel the length of the string in 0.5 seconds,
 - a. What is the frequency of the wave?
 - b. What is the period of the wave?
 - c. What is the wavelength?
 - d. How long is the string?
 - e. What type of wave is traveling along the string?