

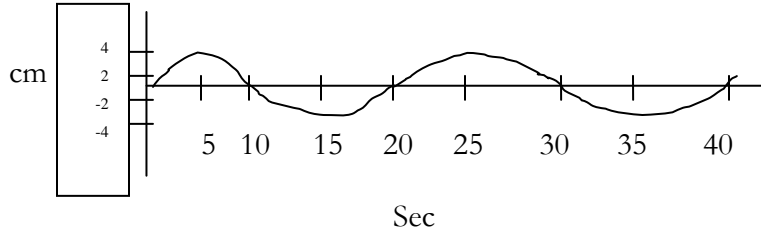


Wave Quiz

Name _____ Date: _____

1. Put the following labels on the wave drawing below.

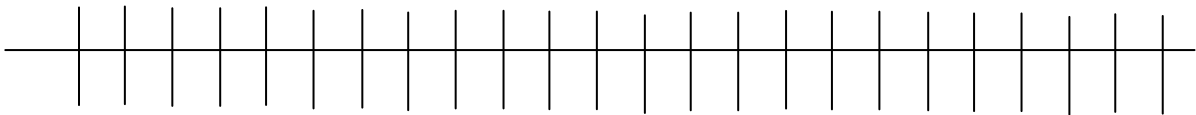
- a) Crest b) Trough c) Wave length d) Amplitude



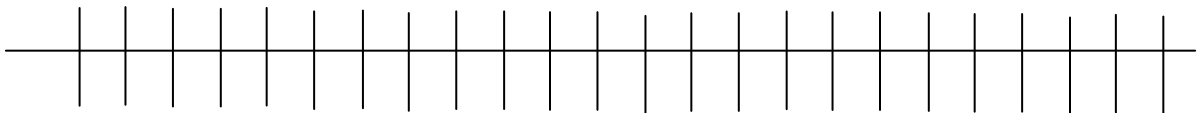
2. Use the wave above to give the numerical value for each term bellow. Note: the wave was not drawn to scale but it was made as good as we could... You may write your terms in either fractions or decimils.

- a) Amplitude _____
 b) Period _____
 c) Frequency _____

3. Draw a wave with a **period** of 10 seconds. Please label the x-axis.



4. Draw a wave with a **frequency** of 4 waves/second. Please label the x-axis.



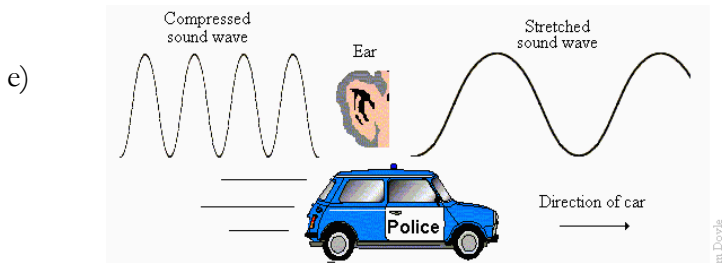
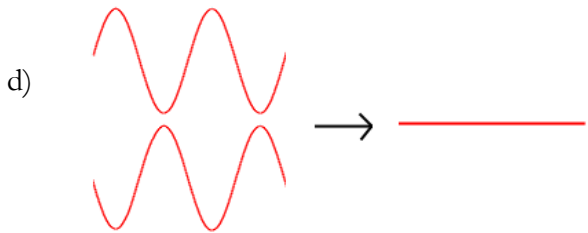
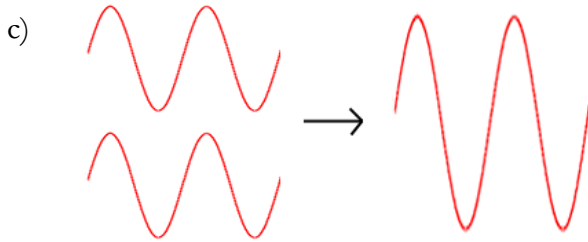
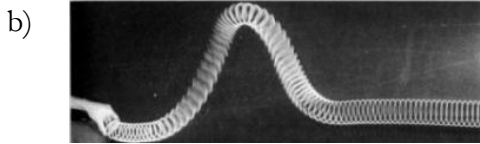
5. Eric is going for a boat ride. (Weeee lucky Eric.) Unfortunately, he gets really sea sick if the frequency of the waves is faster than half a wave a second. If the period is six seconds will Eric need to vomit? Show your thinking in a diagram or math (or both!).

6. What happens to the speed of a sound of a sound wave that goes from water to Jello then back to water? You are encouraged to draw a diagram to help explain your answer.

7. Imagine that you're lost at sea in a life raft, bobbing up and down in the waves. You decide that if you could measure the properties of the waves, it might somehow help you create a strategy for survival, and besides, you have nothing better to do. Describe in detail how you might try to measure the wave's:
 - a) period,
 - b) frequency,
 - c) amplitude,
 - d) wavelength, and
 - e) velocity.

You are encouraged to draw a diagram OR write a procedure to help explain your answer, but be VERY detailed.

8. Please use the diagrams below to match with the corresponding vocabulary words.



Vocabulary Words

Sonic boom

Doppler effect

Constructive interference

Longitudinal wave

Destructive interference

Compressional wave

f)



Extra Credit

Light travels about 3,000,000,000 meters per second. If the wavelength of **red** light is .0000004 meters, what is the frequency? The period? Show all work.

For entertainment, draw a wave cartoon!