

Waves Review 2

Name - _____

- 1.) If waves maintain a constant speed while passing through the same medium, what will happen to the wavelength if the frequency is doubled, and if the amplitude is doubled?

- 2.) What is the frequency of a sound wave if its wavelength is 1.70 m and the speed of sound is $340\frac{\text{m}}{\text{s}}$?

- 3.) Waves of $f = 2.0\text{ Hz}$ are transmitted through a steel spring, what is the wavelength if the spring is 4.0 m long and waves take $1.1 \times 10^{-2}\text{ s}$ to travel its length?

- 4.) A student measures the speed of water waves to be $0.25\frac{\text{m}}{\text{s}}$, and the wavelength to be 0.025 m , find the frequency.

- 5.) A 600 nm light wave has what frequency and what color would it appear as?

- 6.) What is the wavelength of a microwave whose frequency is $3.0 \times 10^{10}\text{ Hz}$?

7.) What is the difference between a pulse and a wave?

8.) Sketch a wave of $4f_0$, show crests, troughs, the wavelength, frequency, and amplitude.

9.) How are period and frequency related?

10.) A dog wags its tail 50 *times* in 20. *s*, find its frequency and period.

11.) What is the difference between a transverse and a longitudinal wave?

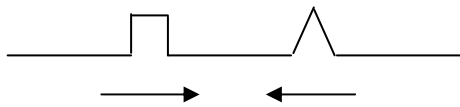
12.) A wave travels from a dense medium to a less dense medium, the media are significantly different.
Sketch the result.

13.) Sketch two pulses which will exhibit constructive interference. Repeat for destructive interference.

14.) Sketch single slit diffraction.

15.) A siren approaches you, as a result of _____ its frequency will be _____, wavelength will be _____, and sound will be _____.

16.) Sketch the result of the two pulses meeting, what is the principle called which causes this result?



17.) Waves on Okanagan Lake pass by a point every 1.5 s. If they travel 20. m in 30. s find their speed, frequency, and wavelength.