

Wave Characteristics Practice A

Name Key

Due: Thursday, December 12

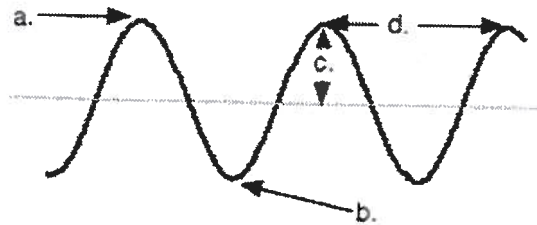
Date _____

Period _____

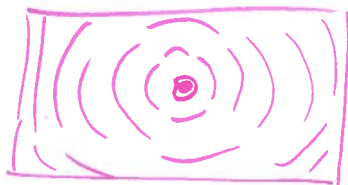
- (4) 1. A disturbance that transmits energy and is caused by vibrations is called a wave.
Some can travel through a vacuum but others need a medium.
(air, water, solids)
- (6) 2. The ability to do work or cause change to matter is called energy.
3. The amount of work done when a force of 1N acts through a distance of 1m is a Joule.
- (7) 4. The highest point on a wave is the crest, while the lowest point is the trough.
5. The amplitude of a wave is a measure of the amount of energy it carries.
- (2) 6. The distance from one crest to the next crest is the wavelength.
- (1) 7. The frequency is a measure of the number of waves that pass a point in a given amount of time.

8. The illustration to the right shows a wave. Label each part in the space below:

- a. crest
- b. trough
- c. amplitude
- d. wavelength



- (10) 9. True or False: Waves are created by a vibration. True
- (11) 10. True or False: An ocean wave will transport ocean water from near the middle of the ocean to the shore. False,
- (a) 11. True or False: All waves can be travel in a vacuum. False, sound cannot
12. Draw a diagram that shows how a wave/energy travels in a medium. (Think about the drop of water.)



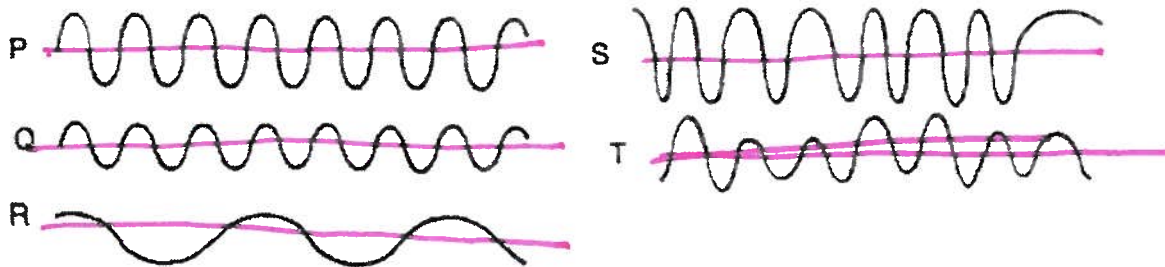
Wave Characteristics Practice

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Use the diagrams of waves drawn below to answer the following questions.



13. Waves P and Q have the same wavelength/frequency, but wave P has twice the amplitude of wave Q.

14. Waves Q and R have the same amplitude, but wave R has twice the wavelength of wave Q.

(16) → 15. Wave T shows a steady frequency but changing amplitude.

(15) → 16. Wave S shows steady amplitude but changing frequency.

17. Waves Q and R have a low amplitude and a steady frequency.

**18. The following questions refer to the diagram to the right:

a. Is this wave transverse or longitudinal? How do you know?

Longitudinal

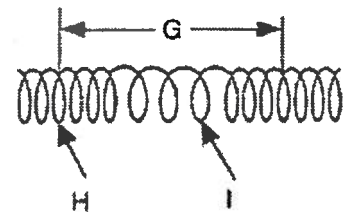
b. Which way does the medium vibrate in relation to the energy?

same direction/parallel

c. Letter H represents Compression "like crest"

d. Letter I represents rarefaction "like trough"

e. Letter G represents wavelength



**19. What is the difference between a transverse and a longitudinal wave?

Transverse waves - ~~energy~~ ^{medium} moves perpendicular to energy of the wave

Longitudinal waves - ~~energy moves parallel to the wave~~ particles in medium ~~move~~ vibrate in the same direction as the energy of the wave

Wave Characteristics Practice B

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1. The frequency is a measure of the number of waves that pass a point in a given amount of time.

2. The distance from one crest to the next crest is the wavelength.

3. The amount of work done when a force of 1N acts through a distance of 1m is a Joule.

4. A disturbance that transmits energy and is caused by vibrations is called a wave. Some can travel through a vacuum but others need a medium (air, water, solids).

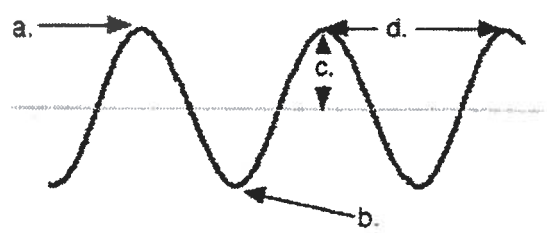
5. The amplitude of a wave is a measure of the amount of energy it carries.

6. The ability to do work or cause change to matter is called energy.

7. The highest point on a wave is the crest, while the lowest point is the trough.

8. The illustration to the right shows a wave. Label each part in the space below:

- a. crest
- b. trough
- c. amplitude
- d. wavelength

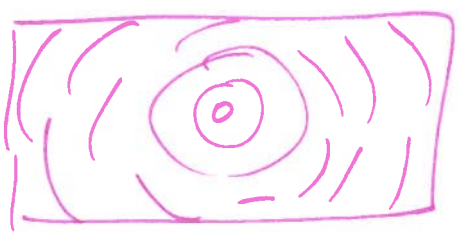


9. True or False: All waves can be travel in a vacuum. False, sound cannot

10. True or False: Waves are created by a vibration. True

11. True or False: An ocean wave will transport ocean water from near the middle of the ocean to the shore. False

12. Draw a diagram that shows how a wave/energy travels in a medium. (Think about the drop of water.)

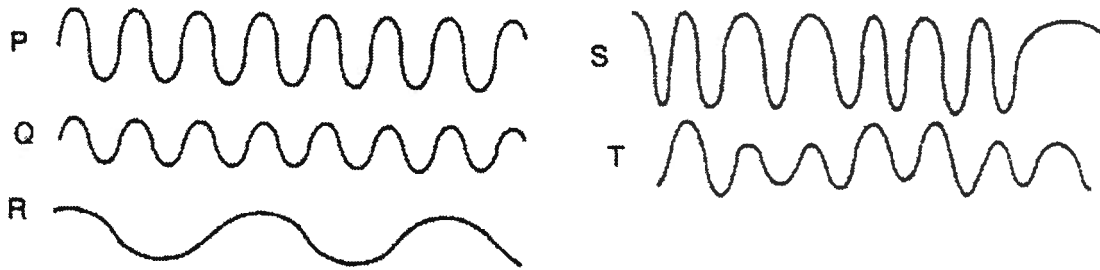


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Longitudinal

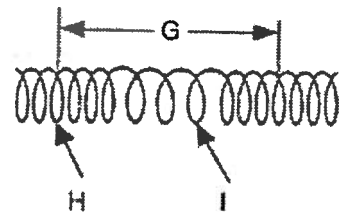
b. Which way does the medium vibrate in relation to the energy?

Some direction / parallel

c. Letter G represents wave length

d. Letter H represents compression "like crest"

e. Letter I represents rarefaction "like trough"



**19. What is the difference between a transverse and a longitudinal wave?

Transverse - medium moves perpendicular to energy of the wave

Longitudinal - particles in medium vibrate in same direction as the energy