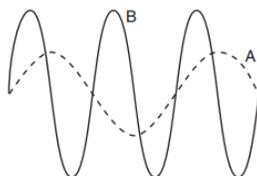


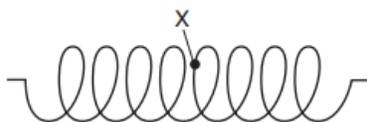
Types of Waves

Directions: Read online textbook pages 452 – 455. Decide whether each picture below shows a transverse wave, longitudinal wave or both. Write your answers in the space provided.

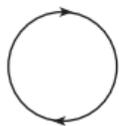
- As a wave travels between two points in a medium, the wave transfers
(A) mass, only (B) energy, only (C) energy and mass (D) neither energy nor mass
- An earthquake wave is traveling from west to east through rock. If the particles of the rock are vibrating in a north-south direction, the wave must be classified as
(A) a microwave (B) a radio wave (C) longitudinal (D) transverse
- The diagram below shows waves A and B in the same medium. Compared to wave A, wave B has



- (A) twice the amplitude and twice the wavelength
(B) twice the amplitude and half the wavelength
(C) the same amplitude and half the wavelength
(D) half the amplitude and the same wavelength
- Transverse waves are to light waves as longitudinal waves are to
(A) radio waves (B) ultraviolet waves (C) microwaves (D) sound waves
- As a longitudinal wave moves through a medium, the particles of the medium
(A) vibrate parallel to the direction of the wave's propagation
(B) vibrate perpendicular to the direction of the wave's propagation
(C) are transferred in the direction of the wave's motion, only
(D) are stationary
- In the diagram below, X represents a particle in a spring.



Which diagram represents the motion of particle X as a longitudinal wave passes through the spring toward the right?



(A)



(B)



(C)

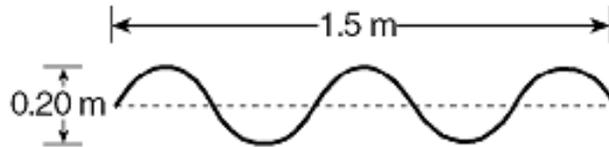


(D)

7. Which statement describes a characteristic common to all electromagnetic waves and mechanical waves?

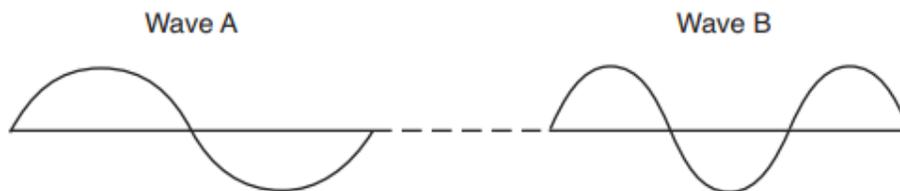
- (A) Both types of waves travel at the same speed.
- (B) Both types of waves require a material medium for propagation.
- (C) Both types of waves propagate in a vacuum.
- (D) **Both types of waves transfer energy.**

8. What are the amplitude and wavelength of the wave shown below?



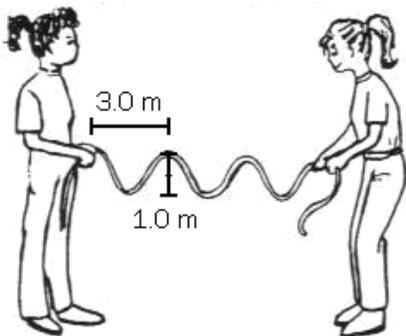
- (A) amplitude = 0.20 m, wavelength = 0.60 m
- (B) **amplitude = 0.10 m, wavelength = 0.60 m**
- (C) amplitude = 0.20 m, wavelength = 0.30 m
- (D) amplitude = 0.10 m, wavelength = 0.30 m

9. The diagram below represents two waves, A and B, traveling through the same uniform medium. Which characteristic is the same for both waves?



- (A) frequency
- (B) **amplitude**
- (C) period
- (D) wavelength

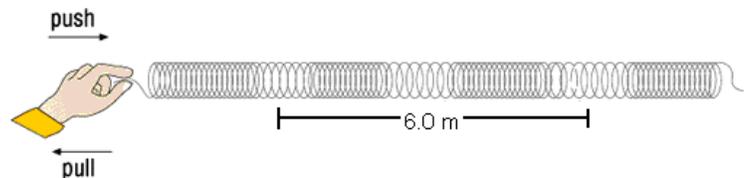
Directions: Look at each of the following waves created in the picture and fill in the requested information.



Type of wave: **Transverse**

Amplitude: **0.50 m**

Wavelength: **3.0 m**



Type of wave: **Longitudinal**

Wavelength: **6.0 m / 2 waves = 3.0 m**