

Problem set 10 -- Individual work only

NAME: _____

Number _____

1. Which type of wave can be transmitted through space, where there is no air?
(A) Light, only
(B) Sound, only
(C) Both light and sound
(D) Neither light nor sound

Justification:

Answer: _____

2. A tuning fork vibrating in air produces sound waves. These waves are best classified as
(A) transverse, because the air molecules are vibrating parallel to the direction of wave motion
(B) transverse, because the air molecules are vibrating perpendicular to the direction of wave motion
(C) longitudinal, because the air molecules are vibrating parallel to the direction of wave motion
(D) longitudinal, because the air molecules are vibrating perpendicular to the direction of wave motion

Justification:

Answer: _____

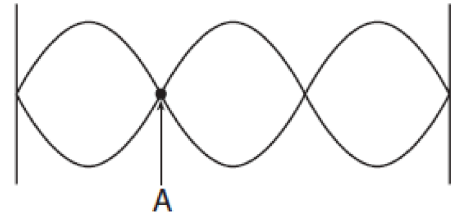
3. Radio waves and gamma rays are both electromagnetic waves that our eyes cannot see. Radio waves and gamma rays traveling in space have the same
(A) Frequency
(B) Wavelength
(C) Period
(D) Speed

Justification:

Answer: _____

4. The diagram shows a standing wave. Point *A* on the standing wave is

- (A) A node resulting from constructive interference
- (B) A node resulting from destructive interference
- (C) An antinode resulting from constructive interference
- (D) An antinode resulting from destructive interference



Justification:

Answer: _____

5. A sound wave traveling eastward through air causes the air molecules to

- (A) Vibrate east and west
- (B) Vibrate north and south
- (C) Move eastward, only
- (D) Move northward, only

Justification:

Answer: _____