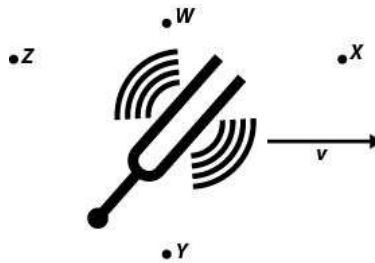


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Physical Science Chapter 17 Practice Sheet

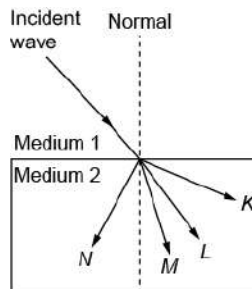
1. Dave strikes a tuning fork that rings at a constant frequency. Dave moves the tuning fork to the right at a constant speed while observers are located at points W, X, Y, and Z. Which observer hears the lowest frequency?

- a. W
- b. X
- c. Y
- d. Z



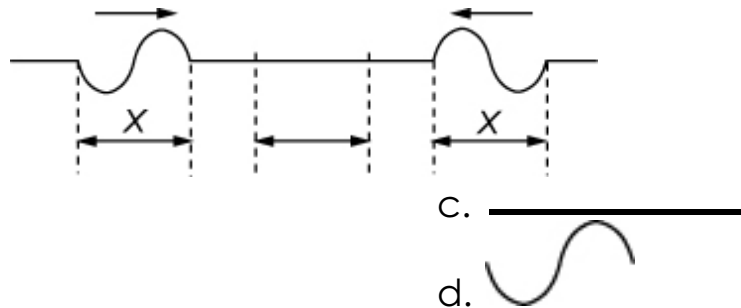
2. If the speed of the ray increases as it passes from medium 1 into medium 2, which arrow BEST represents the direction of the ray in medium 2?

- a. K
- b. L
- c. M
- d. N



3. Which diagram BEST represents the shape of the rope when the pulses meet each other?

- a.
- b.



4. The superposition of two waves traveling in the same medium produces a standing wave pattern when the two waves have which of the following characteristics?
- a. the same frequency, different amplitudes, and the same direction of travel
 - b. the same frequency, the same amplitude, and opposite directions of travel
 - c. the same frequency, different amplitudes, and opposite directions of travel
 - d. the same frequency, the same amplitude, and the same direction of travel

5. A train blows its whistle as it moves rapidly towards a stationary observer. Which of the following BEST describes the sound of the whistle as heard by the observer in comparison to the sound as heard by a passenger on the train?
- The sound heard by the observer will be the same as the sound heard by the passenger.
 - The sound heard by the observer will be of a higher volume than the sound heard by the passenger.
 - The sound heard by the observer will be higher in pitch than the sound heard by the passenger.
 - The sound heard by the observer will be lower in pitch than the sound heard by the passenger.

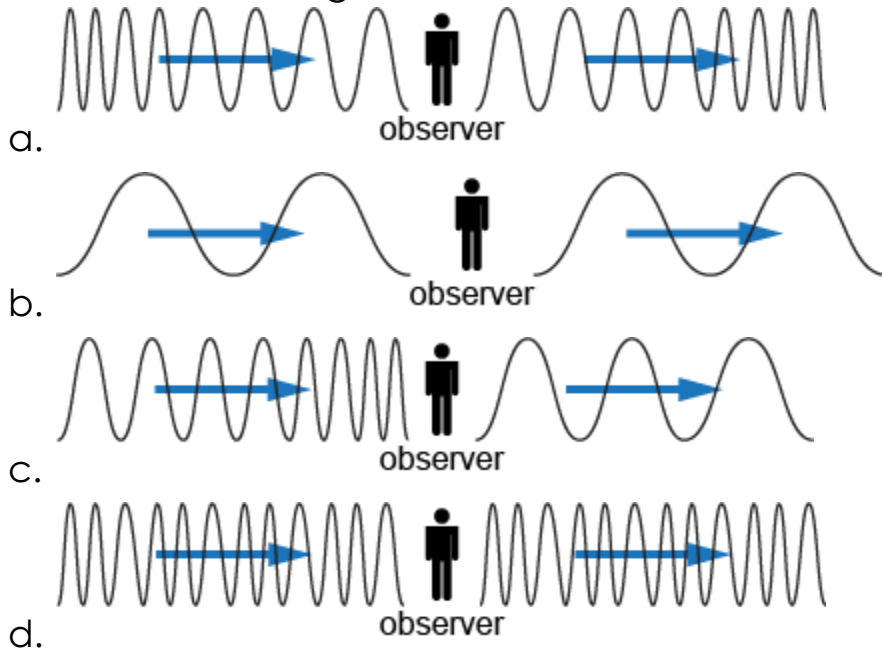
6. Which of the following types of interference will occur when the pulses in the figure meet?

- no interference
- constructive interference
- destructive interference
- total interference



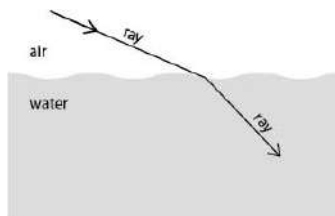
7. Which of the following statements is true with regard to the angles of incidence and reflection?
- The angles of incidence and reflection are equal.
 - The angle of incidence is greater than the angle of reflection.
 - The angle of incidence is less than the angle of reflection.
 - The angle of incidence can be greater than or less than the angle of reflection.
8. Which of the following BEST describes refraction?
- The bending of a wave as it reflects at an angle from a surface.
 - The bending of a wave as it passes at an angle from one material to another.
 - The bending of a wave as it goes around, or passes through, openings in a barrier.
 - The bending of one wave as two or more waves try to occupy the same space at the same time.
9. When the pitch of a musical note increases, what characteristic of the sound wave also increases?
- wavelength
 - amplitude
 - period
 - frequency

10. Which of the following BEST describes diffraction?
- the bending of a wave as it crosses the boundary between two materials
 - the bending of a wave as it reflects from a rough surface
 - the bending of a wave as it goes around, or passes through, openings in a barrier
 - the bending of a wave as it reflects from a smooth surface
11. A student wants to create a model to demonstrate the change in sound waves from a moving source. Which model should the student create?

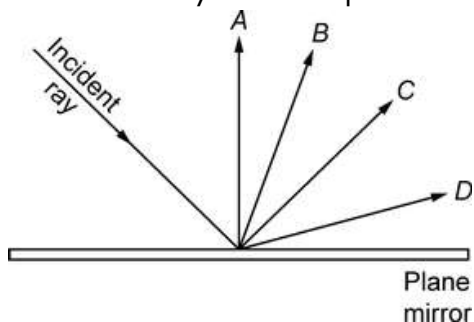


12. Which phenomenon is represented in the diagram?

- refraction
- reflection
- diffraction
- interference



13. Which ray BEST represents the reflected ray?



- A
- B
- C
- D

14. A wave is diffracted as it passes through an opening in a barrier. The amount of diffraction that the wave undergoes depends on
- the amplitude and frequency of the incident wave.
 - the wavelength and speed of the incident wave.
 - the amplitude of the incident wave and the size of the opening.
 - the wavelength of the incident wave and the size of the opening.
15. Which of the following diagrams BEST represents the superposition of the two pulses?

