

Sound (6.P.1.3)

Name: _____

Date: _____

1. An echo heard when a person shouts in a canyon is due to the sound waves being
A. mixed B. refracted C. diffracted D. reflected
2. The loudness of a sound is dependent upon which wave property?
A. wavelength B. amplitude
C. frequency D. pitch
3. As the tension in a guitar string is increased, the wavelength of the sound produced will
A. decrease B. increase
C. remain the same
4. A point in a sound wave at which the particles of the transmitting medium are farther apart than when at the rest position is called a
A. compression B. crest
C. trough D. rarefaction
5. If the tongs of a vibrating tuning fork touch a water surface, the water splashes, this is evidence that sound is a form of
A. atomic energy B. chemical energy
C. heat energy D. mechanical energy
6. Increasing the amplitude of a sound wave will make it
A. louder B. have a higher pitch
C. travel faster D. produce beats
7. In general, compared to the speed of sound through air, the speed of sound through liquids and solids is
A. slower B. faster C. the same
8. Sound is a form of
A. thermal energy B. mechanical energy
C. radiant energy D. electrical energy
9. The loudness of a sound will be determined by its
A. amplitude B. pitch
C. wavelength D. frequency
10. The tendency of sound waves to bend when they pass from one medium to a different medium is known as
A. refraction B. reflection
C. resonance D. interference
11. The tendency of sound waves to bend when they pass from one medium to a different medium is known as
A. refraction B. reflection
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12. The tendency of sound waves to bend when they pass from one medium to a different medium is known as
A. refraction B. reflection
C. resonance D. interference
13. As the tension of a vibrating string is decreased, the pitch of the sound produced will
A. decrease B. increase
C. remain the same
14. Sound can *not* be transmitted through a
A. gas B. liquid C. solid D. vacuum
15. Sound travels as
A. an electromagnetic wave B. a transverse wave
C. a longitudinal wave D. a permanent wave
16. As the temperature of air increases, the speed of sound in air
A. decreases B. increases
C. remains the same

17. Which phenomenon does *not* occur when a sound wave reaches the boundary between air and a steel block?

- A. reflection
- B. refraction
- C. polarization
- D. absorption

18. The amplitude of a sound wave is to its loudness as the amplitude of a light wave is to its

- A. brightness
- B. frequency
- C. color
- D. speed

19. An electric guitar is generating a sound of constant frequency. An increase in which sound wave characteristic would result in an increase in loudness?

- A. speed
- B. period
- C. wavelength
- D. amplitude

20. An electric bell connected to a battery is sealed inside a large jar. What happens as the air is removed from the jar?

- A. The electric circuit stops working because electromagnetic radiation can not travel through a vacuum.
- B. The bell's pitch decreases because the frequency of the sound waves is lower in a vacuum than in air.
- C. The bell's loudness increases because of decreased air resistance.
- D. The bell's loudness decreases because sound waves can not travel through a vacuum.

21. The energy of a sound wave is most closely related to its

- A. period
- B. amplitude
- C. frequency
- D. wavelength