Name:_____ Class:_____ Date:_____

Assessment

Sound: Quiz 1

Section Quiz: Sound Waves

Write the letter of the correct answer in the space provided.

_____ 1. A sound wave is an example of a(n) _____ wave.
a. transverse
b. longitudinal
c. crest-and-trough
d. electromagnetic

_____ 2. A sound wave consists of a series of
a. compressions and rarefactions.
b. longitudes and latitudes.
c. hills and valleys.
d. perpendicular vibrations

_____ 3. The human perception of pitch depends on a sound's
a. velocity.
b. wavelength.
c. frequency.
d. amplitude.

_____ 4. Sound generally travels faster through solids than through gases because the particles (atoms or molecules) of a solid are _____ than the particles of a gas.
a. closer together
b. heavier
c. warmer
d. larger

_____ 5. Sound waves from a vibrating source travel
a. in one direction.
b. in two directions.
c. in all directions.
d. back and forth.

_____ 6. Spherical wave fronts can be treated as parallel lines when
a. they are very near the source.
b. the frequency is very high.
c. the wavelength is very large.
d. they are a large distance from the source.

_____ 7. When you hear the sound from a vehicle that is moving toward you, the pitch is higher than it would be if the vehicle were stationary. The pitch sounds higher because the
   a. sound waves arrive more frequently.
   b. sound from the approaching vehicle travels faster.
   c. wavelength of the sound waves becomes greater.
   d. amplitude of the sound waves increases.

_____ 8. Suppose you are on a moving bus as it passes a stationary car in which a stereo is playing music. As the bus goes past the car, you will hear the pitch of the music
   a. become higher.
   b. become lower.
   c. remain constant.
   d. become lower, then higher.

9. Describe how a sound wave is created by an object vibrating in air. Use the words *compression* and *rarefaction* correctly in your explanation.

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10. The diagrams above represent sound waves created by two different vibrating objects. Assuming that both waves are traveling through the same medium, which wave is produced by the object vibrating at the higher frequency? Explain your choice.

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