WAVES WORKSHEET

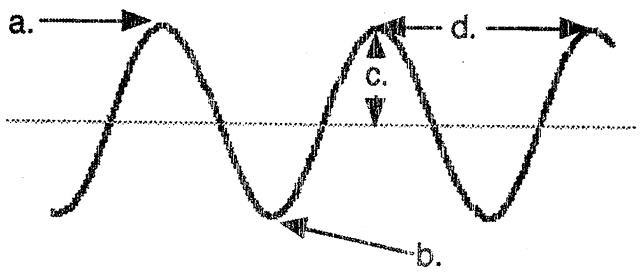
1. The highest point on a wave is the _____, while the lowest point is the _____.

2. The _____ of a wave is a measure of the amount of energy it carries.

3. The distance from one crest to the next crest is the _____.

4. The _____ is a measure of the number of waves that pass a point in a given amount of time.

5. The illustration to the right shows a wave. Label each part in the space below:



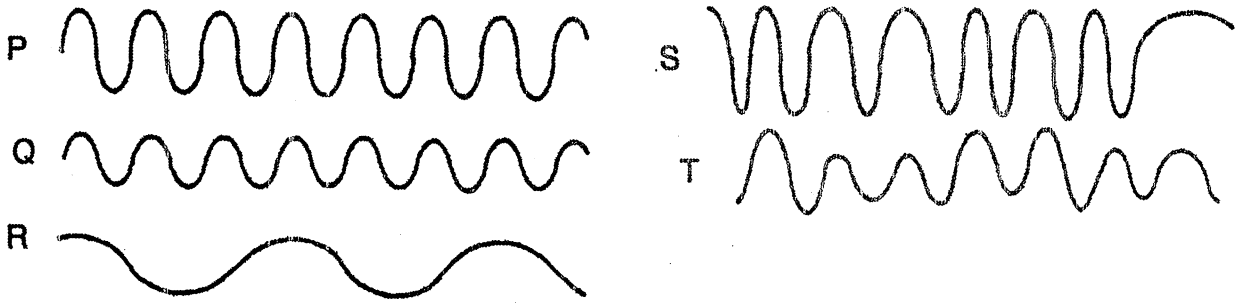
a. _____

b. _____

c. _____

d. _____

6. Use the five illustrations of waves drawn below to answer the following questions:



Waves P and Q have the same _____, but wave P has twice the _____ of wave Q.

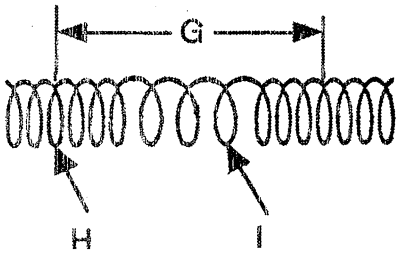
Waves Q and R have the same _____, but wave R has twice the _____ of wave Q.

Wave _____ shows a steady frequency but changing amplitude.

Wave _____ shows steady amplitude but a changing frequency.

Waves _____ and _____ have a low amplitude and a steady frequency.

7. The following questions refer to the diagram to the right:



Is this wave transverse or longitudinal?

Letter H represents a _____ and
Letter I represents a _____.

Letter G represents a _____.

8. In what type of wave is the vibration perpendicular to the direction of travel of the wave?
_____

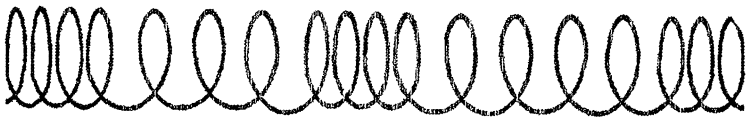
9. What type of wave vibrates parallel to the direction of travel? _____

10. What type of wave contains compressions and rarefactions? _____

11. What type of wave is produced when you move one end of a horizontal spring up and down?
_____

12. What type of wave has a wavelength? _____

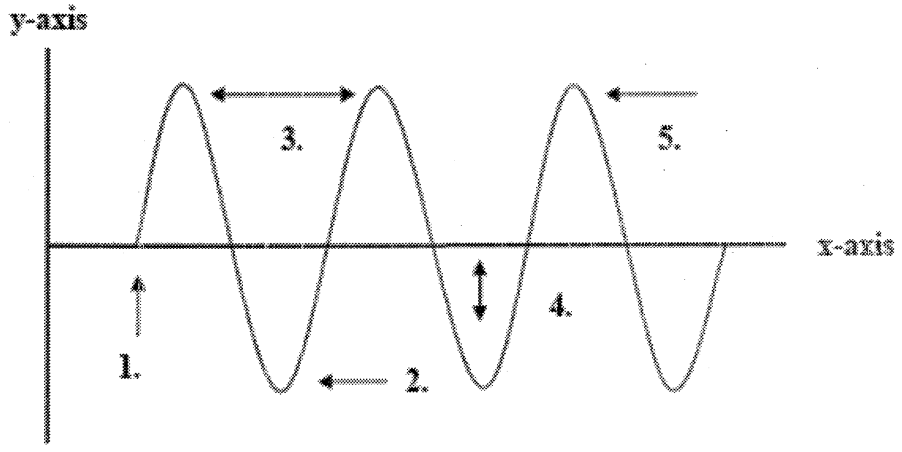
13. Obtain a ruler and determine the wavelength of the wave to the right.



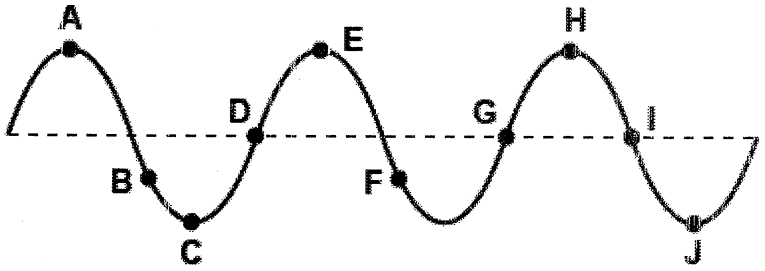
Wavelength = _____

14. In the diagram below, identify the parts of a wave by using the provided definitions.

#____ = crest	the highest point of the wave above the line of origin.
#____ = trough	the lowest point of the wave below the line of origin.
#____ = line of origin	signifies the original position of the medium.
#____ = wavelength	the distance between two consecutive crests.
#____ = amplitude	the distance from the line of origin to a crest or trough of a wave.

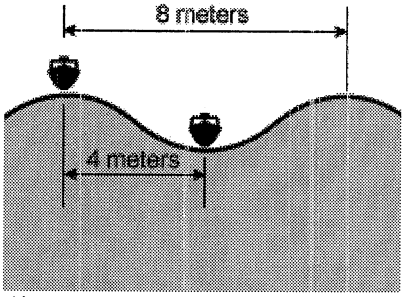


15. The distance between which two points is one wavelength?



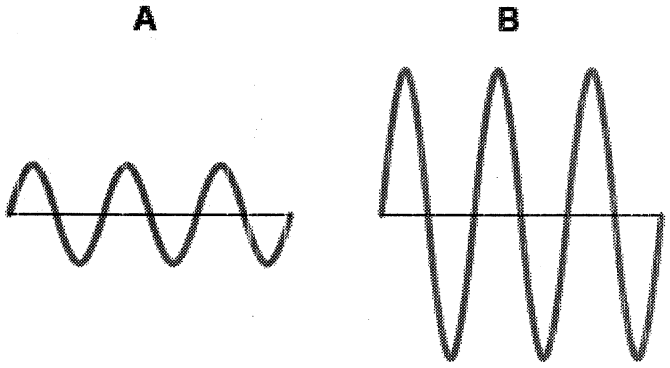
1) A and C 2) B and F 3) D and E 4) G and I

16. The wavelength shown in the diagram is .



1) 2 meters 2) 4 meters 3) 8 meters 4) 12 meters

17. Wave B will create a sound than wave A.



1) Louder 2) quieter 3) lower pitch 4) higher pitch

18. The distance between one point on a compression and the corresponding point on the next compression in a sound wave is called a

1) Wavelength 2) rarefaction 3) crest 4) trough

19. Through which of these can sound not travel?

1) Wood 2) Water 3) Vacuum 4) Air

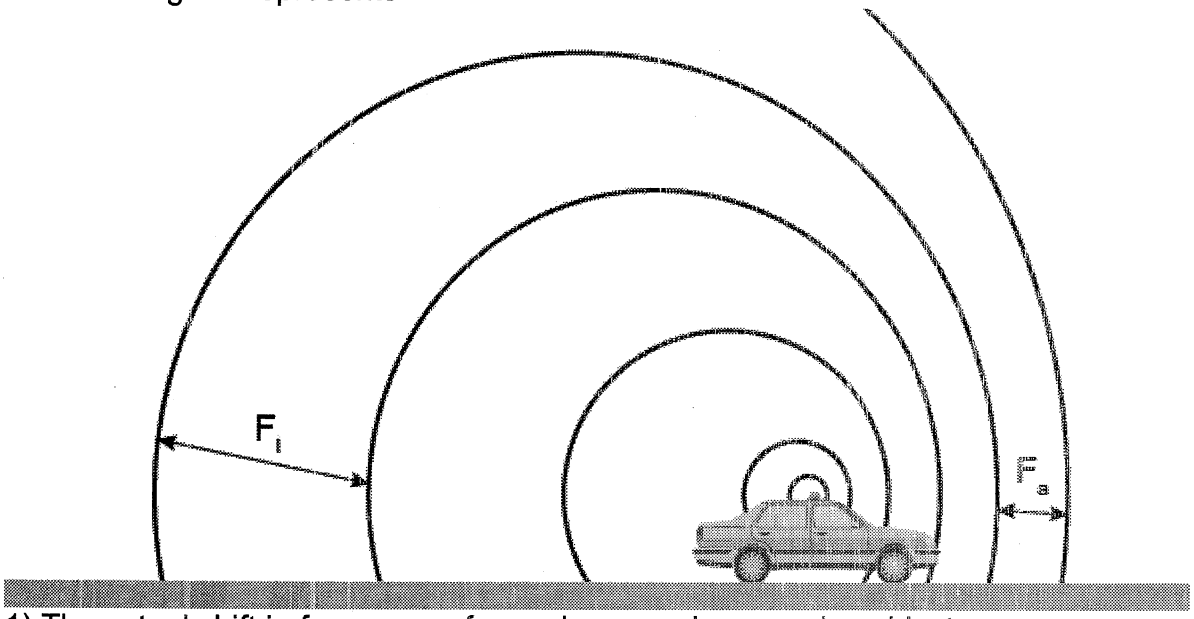
20. Due to the Doppler effect, when moving AWAY from the source of a sound,...
1) The pitch of the sound should get lower
2) The pitch of the sound should get higher
3) The sound should get louder
4) The sound should get more quiet

21. Objects that vibrate with large amplitudes produce what kind of sounds?
1) High pitch 2) Quiet 3) Low pitch 4) Loud

22. If a wave has a high frequency then it has a high pitch.
1) True 2) False

23. A wave that has a great amount of energy has a large amplitude.
1) True 2) False

24. The diagram represents



1) The actual shift in frequency of sounds waves by a moving object
2) The apparent shift in frequency of sounds waves by a moving object
3) The actual shift in frequency of sounds waves by a stationary object
4) The apparent shift in frequency of sounds waves by a stationary object

25. What is a wave?
1) A vibration that transfers energy
2) Disturbance that transfers energy from every place
3) Energy disturbance
4) A disturbance in water