



Chapter Review

Waves

Part A. Vocabulary Review

Directions: Choose the correct term from the list below and write it in the space beside each definition.

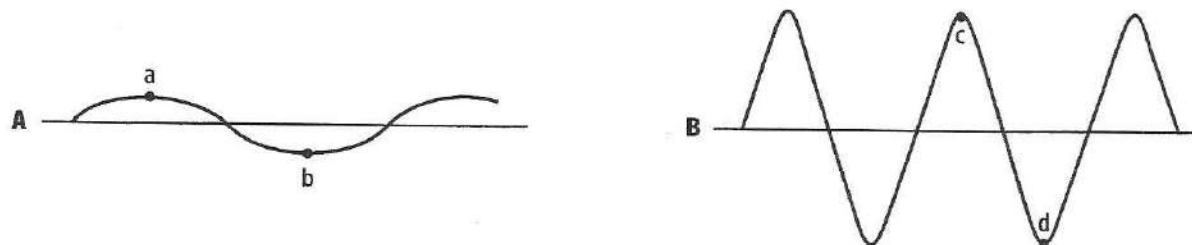
amplitude	compression	diffraction	compressional wave
crest	frequency	interference	
law of reflection	medium	rarefaction	reflection
refraction	resonance	standing wave	
transverse wave	trough	wavelength	waves

- | | |
|---|--|
| <u>Reflection</u> | 1. when a wave strikes an object and bounces off |
| <u>Waves</u> | 2. repeating disturbances that transfer energy through matter or space |
| <u>Crest</u> | 3. highest point of a transverse wave |
| <u>Compression</u> | 4. region where the medium is crowded and dense in a compressional wave |
| <u>Transverse wave</u> | 5. wave that makes matter in the medium move back and forth at right angles to the direction the wave travels |
| <u>Interference</u> | 6. ability of two or more waves to combine and form a new wave |
| <u>Trough</u> | 7. lowest point of a transverse wave |
| <u>Medium</u> | 8. material through which a wave transfers energy |
| <u>Diffraction</u> | 9. the bending of waves around a barrier |
| <u>Rarefaction</u> | 10. less dense region of a compressional wave |
| <u>Resonance</u> | 11. ability of an object to vibrate by absorbing energy at its natural frequency |
| <u>Compressional wave</u> | 12. wave in which matter in the medium moves back and forth in the same direction the wave travels |
| <u>Wavelength</u> | 13. distance between one point in a wave and the nearest point just like it |
| <u>Frequency</u> | 14. measure of how many wavelengths pass a fixed point each second |
| <u>Law of reflection</u> | 15. the angle of incidence is equal to the angle of reflection |
| <u>Standing wave</u> ^{Amplitude} | 16. measure of the energy in a wave |
| <u>Standing wave</u> | 17. a special type of wave pattern that forms when waves of equal wavelength and amplitude traveling in opposite directions continuously interfere with each other |
| <u>Refraction</u> | 18. the bending of a wave caused by a change in its speed as it moves from one medium to another |

Chapter Review (continued)

Part B. Concept Review

Directions: Use the diagram below to answer questions 1–5.



1. What type of wave is wave A? Transverse wave
2. Which wave carries more energy? B
3. What do points a and c represent? Crests
4. What do points b and d represent? Troughs
5. How does the frequency of wave B compare with that of wave A?

It is 2 times greater.

Directions: Using the equation $v = \lambda \times f$, find the missing values.

6. What is the velocity of a wave with a frequency of 760 Hz and a wavelength of 0.45 m?

320 m/s

7. A wave with a wavelength of 15 m travels at 330 m/s. Calculate its frequency.

22 Hz

Directions: Answer the following questions on the lines provided.

8. How do scientists know that seismic waves can be either compressional or transverse?

Rock piles ~~can~~ are moved in the same direction as a seismic waves motion, or they can be moved at right angles to it.

9. Why do surfers like water waves with high amplitudes?

The higher a water wave is the more energy it carries. Surfer will get a faster, longer ride.

10. Will loud sounds from traffic near a school break glass objects inside the school? Explain.

If the sound has a high enough amplitude, the glass will shatter.