Name Date Class

SECTION 3 Reinforcement

The Behavior of Waves

CHAPTER 9.3 REVIEW

Directions: *Answer the following questions on the lines provided.*

1. How is an echo produced?

2. When light is reflected, how are the angle of incidence and the angle of reflection related?

3. Compare and contrast refraction and diffraction.

4. What happens to the direction of a light wave when it passes from a less dense medium such as air into a more dense medium such as glass?

5. Why does a tree in the path of sunlight create a shadow instead of the light spreading around the tree?

6. What happens when two waves approach and pass each other?

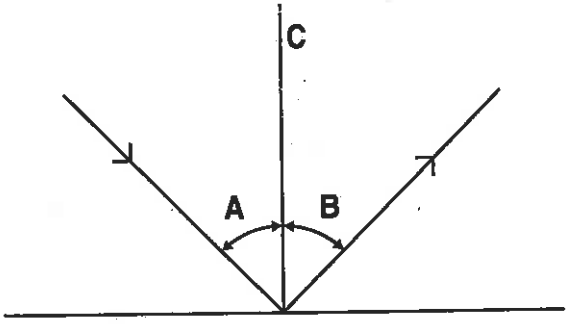
7. When is a standing wave produced?

Chapter Test B (continued)

II. Understanding Concepts

Skill: Interpreting a Scientific Diagram

Directions: *Use the diagram to answer questions 1 and 2.*



1. In the diagram, identify each part by filling in the blanks below.

   a. _____

   b. _____

   c. _____

2. What is the relationship between A and B in the diagram?

   _____

Skill: Measuring Data

Directions: *Match the units in one column to the quantities they measure in the other column by writing the correct letter in the space provided.*

_____	3. wavelength	a.	meter
_____	4. frequency	b.	meters/second
_____	5. wave speed	c.	hertz

Directions: *Circle the word in parentheses that makes each statement correct.*

6. If an obstacle is much larger than the wavelength of a wave, almost no (refraction, reflection, diffraction) occurs.
7. When you shake a rope up and down, you create a (transverse, compressional, seismic) wave.
8. When part of Earth's crust breaks, (seismic, tidal, uniform) waves pass through Earth.
9. In a given medium, as the frequency of a wave increases, its speed (increases, decreases, remains the same).
10. In a standing wave, the point at which the medium doesn't move is called the (antinode, node, compression).

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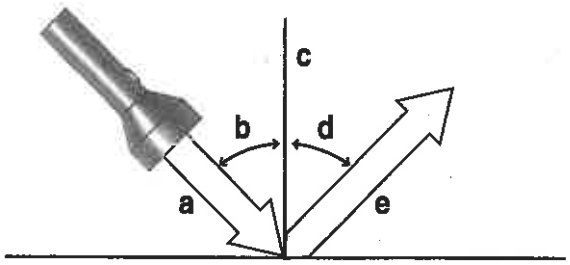
Directed Reading for Content Mastery

Section 3 ▪ The Behavior of Waves

Directions: *The illustration below represents the law of reflection. Copy the letters from the illustration next to the terms they stand for.*



1. _____ normal
2. _____ angle of reflection
3. _____ reflected beam
4. _____ incident beam
5. _____ angle of incidence

Directions: *Answer the questions in the space provided.*

6. If you are picking up a coin on the bottom of the pool, can you just reach for where the coin appears to be? Why or why not?

7. What causes waves to bend?

8. What are the two types of interference and how do they work?

   a. _____

   b. _____

9. What is a standing wave?

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Waves in Action

Use this worksheet to study Lesson 11.3.

1. When a wave hits a barrier directly, it _____ _____.

2. An example of wave reflection would be _____.

a. water waves spreading out in all directions
b. sound waves bending around a corner
c. water waves bouncing off the side of a swimming pool

3. The law of reflection states that the angle of incidence _____ the angle of reflection.

a. equals
b. does not equal

4. A fishnet dipped into an aquarium may look crooked because of wave _____.

a. reflection
b. diffraction
c. refraction
d. interference

5. A wave may change speed and _____ when it enters a different medium.

6. Wave refraction occurs because a wave may travel at different _____ in different mediums.

7. An example of wave refraction would be _____.

a. seeing yourself in a mirror
b. ocean waves passing by a breakwater
c. a ruler that looks broken when it is partly placed into water

8. Why is wave refraction similar to the way a car swerves if it goes through a puddle on one side of the lane?

_____

_____

_____