

Name: _____

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Chapter 19.2 Homework

Conceptual Physics

Parent Signature: _____

Each numbered question is worth one point unless otherwise noted.

Reviewing Concepts

9. Sketch the wave crests, indicating the direction of motion, for
- a circular wave.
 - a plane wave.

10. The diagrams on page 464 represent interactions between waves and boundaries. Identify each interaction by name.

A

B

C

D

11. What happens to the amplitude of a wave when the wave is absorbed? (0.5)

12. Explain why you can hear a sound through a door that is only open a crack. Use the terms *wave* and *interaction* in your answer.

13. Read the descriptions below and indicate which of the four types of wave interactions—absorption, reflection, refraction, or diffraction—has occurred. (1.5)

- The distortion of your partially-submerged arm that makes it look “broken” when viewed from above the water’s surface.
- You hear the music even though you are seated behind an obstruction at a concert.
- You see yourself in a mirror.
- Water ripples become smaller after passing through a sponge.
- Heavy curtains are used to help keep a room quiet.

Solving Problems

9. The wave in the picture on page 465 is about to pass through a small hole. Sketch what the wave front will look like after it passes through the hole.