

Name: _____

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Chapter 22.1 Homework

Conceptual Physics

Parent Signature: _____

Each numbered question is worth one point unless otherwise noted.

Reviewing Concepts

1. What are light rays, and what are they used for?

5. Glare from headlights can make it harder to see when driving at night. Glare is worse when roads are wet from rain versus when roads are dry. Explain why this happens in terms of the two types of reflection. (2)

6. What happens to light when it travels through a prism? What happens to light as it travels through a lens?

7. When drawing a ray diagram, what is the normal line?

8. What is the law of reflection? (0.5)

9. Describe how you measure the angle of incidence. (0.5)

Solving Problems

1. A ray of light strikes a mirror as shown on page 539. Which of the rays (a, b, c, or d) best describes the path of the light ray leaving the mirror? (0.5)

2. A light ray strikes a mirror and is reflected. The angle between the incident ray and the reflected ray is 60° . What is the angle of reflection for this ray? Draw a diagram to support your answer.

3. If you stand 2 m in front of a mirror, what is the apparent distance between you and your image? (0.5)

4. A light ray strikes a mirror and is reflected as shown on page 539.

a. Copy the sketch and draw the normal line to the mirror. (1)

b. On your sketch, label the angle of incidence and the angle of reflection. (0.5)

c. If the angle of incidence is 45° , what is the angle of reflection? (0.5)