

Goal • Check your understanding of Chapter 5.

What to Do

Circle the letter of the best answer.

1. The ray model of light explains that a distant light source is dimmer than a nearby light source. Why is this result observed?
 - A. Light travels in straight lines.
 - B. The angle of incidence equals the angle of reflection.
 - C. The light rays are blocked by objects between the light source and the observer.
 - D. The light rays spread out as they travel.
2. In a translucent material, which of the following is true?
 - A. The light rays are absorbed and no clear image is seen through the material.
 - B. The light rays are scattered and no clear image is seen through the material.
 - C. The light rays are transmitted without scattering and a clear image is seen through the material.
 - D. The light rays are transmitted without scattering but no image is seen through the material.
3. When light reflects off white paper, why does a mirror image not form?
 - A. The law of reflection does not apply to light reflected from paper.
 - B. The light rays are absorbed by the paper.
 - C. The paper is not made out of metal.
 - D. The paper is not smooth enough to reflect light rays in a regular way.
4. When light rays pass from air into glass, which of the following is true?
 - A. They bend away from the normal as they move into a material with greater density.
 - B. They bend away from the normal as they move into a material with lower density.
 - C. They bend toward the normal as they move into a material with greater density.
 - D. They bend toward the normal as they move into a material with lower density.
5. A mirror that curves outward is used as a rearview mirror in a car. Why is this type of mirror used?
 - A. It allows more objects to be seen than in a flat mirror of the same size.
 - B. It magnifies the objects seen in the mirror.
 - C. It makes the objects look smaller than they would using a flat mirror.
 - D. The image is clearer than in a flat mirror.

6. Which of the following is **not** a typical use for a mirror with an inward curve?
- as a make-up or shaving mirror in order to see a magnified image
 - at the back of a telescope in order to collect light
 - behind the light in a flashlight to make a focussed beam
 - on the wall of a store for security purposes
7. In a ray diagram, the incoming ray is called which of the following?
- incident ray
 - normal
 - reflected ray
 - refracted ray
8. A large ball is coated with a reflective material so that it becomes a spherical mirror. As you approach this mirror you can see your own reflection in it. What does your reflected image look like?
- larger and right side up
 - larger and upside down
 - smaller and right side up
 - smaller and upside down
9. Which of the following is correct?
- A real image is behind the mirror.
 - A real image is formed when extended rays meet.
 - A real image is formed when reflected rays meet.
 - A virtual image is in front of the mirror.

Match the Term on the left with the best Descriptor on the right.
Each Descriptor may be used only once.

Term	Descriptor
_____ 10. angle of reflection	A. equal to angle of incidence
_____ 11. focal point	B. light cannot pass through
_____ 12. normal	C. light passes though it freely
_____ 13. opaque	D. perpendicular to a surface
_____ 14. transparent	E. place where rays converge

Short Answer Questions

15. Contrast these terms:

(a) transmit, absorb

(b) translucent, transparent

16. Draw a light ray reflecting off of a plane mirror. Label the incident ray, reflected ray, normal, angle of incidence, and angle of reflection.

