

1. When light moves from a medium where its speed is higher to a different medium where its speed is lower, the refracted ray is bent
 - (a) away from the normal.
 - (b) along the normal.
 - (c) along the surface.
 - (d) perpendicular to the normal.
 - (e) toward the normal.
2. An object is placed 6 cm in front of a lens that has a focal length of 4 cm. Its image is
 - (a) real and inverted.
 - (b) real and upright.
 - (c) real and horizontal.
 - (d) virtual and upright.
 - (e) virtual and inverted.
3. When attempting to spear from shore a fish some distance away from you in a lake, you should aim
 - (a) directly at its image.
 - (b) to the right of its image.
 - (c) above its image.
 - (d) below its image.
 - (e) straight up.
4. If you place your eye 20 cm from a spherical mirror with a radius of 12 cm, the image of your face will be
 - (a) real and inverted.
 - (b) virtual and upright.
 - (c) virtual and inverted.
 - (d) real and upright.
 - (e) invisible.
5. A dentist needs a small mirror that will produce an upright image 4 times as large as a tooth when the mirror is 3 cm from the tooth. Which of the following mirrors would be best for this application?
 - (a) Concave with focal length magnitude 4 cm.
 - (b) Convex with focal length magnitude 4 cm.
 - (c) Concave with focal length magnitude 8 cm.
 - (d) Convex with focal length magnitude 1.3 cm.
 - (e) Convex with focal length magnitude 8 cm.

EXTRA CREDIT (1 POINT)

Write Maxwell's Equations.