

Mirror Practice Problems

1. A small object is placed 50 cm from a concave mirror with a focal length of 20 cm.
 - a) How far is the image from the mirror?
 - b) Is the image on the same side of the mirror as the object?
 - c) Is the image upright or inverted?
 - d) Is the image real or virtual?
 - e) If the object is 8 mm tall, how tall is the image?

2. A 6.0 cm tall pin is located 20 cm from a concave mirror with a 25 cm focal length. Determine the location, size, type and orientation of the image of the pin using the curved mirror and magnification equations.

3. A concave mirror produces a real, inverted image of an object. The image is half the size of the object. If the object is 40 cm from the mirror, what is its focal length?

4. A dentist uses a small mirror of radius 40mm to locate a cavity in a patient's tooth. The mirror is concave and held 16mm from the tooth.
 - a) What is the magnification of the image?
 - b) What is the mirror's focal length?
 - c) What is the distance of the image from the mirror?
 - d) Is the image real or virtual?
 - e) Is the image upright or inverted?

5. A production line inspector wants a mirror that produces an upright image with a magnification of 7.5 when it is located 14.0 mm from a machine part.
 - a) What kind of mirror would do this job?
 - b) What is the radius of curvature?