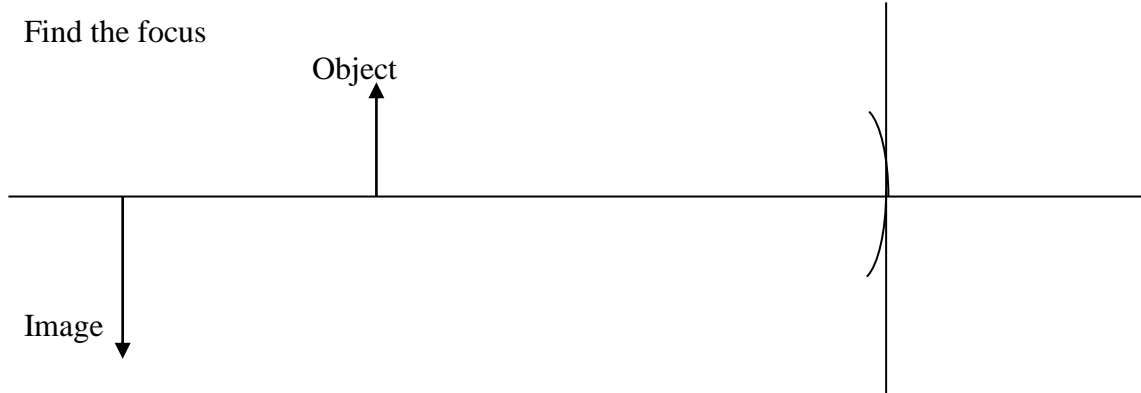


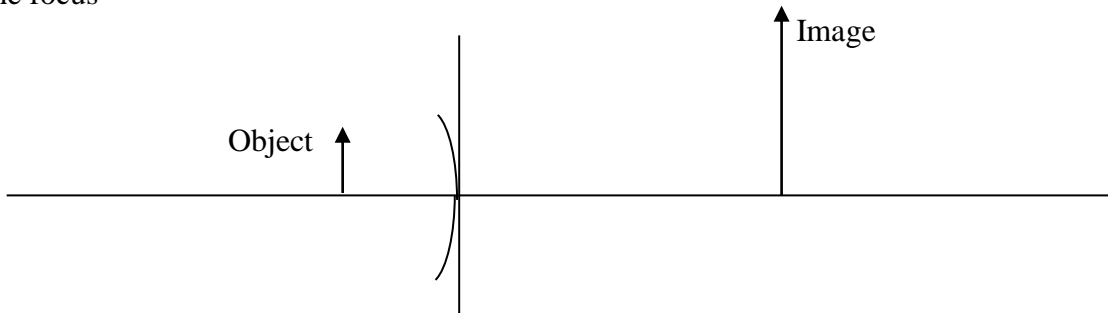
Mirror Practice Problems

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 pin is located 20 cm from a 25 cm focal length concave mirror. Determine the location, size, nature and orientation of the image of the pin.
3. A light source 30 cm from a concave mirror on the lab bench produces an image across the room on the wall, a distance of 10 metres away.
 - a) What is the focal length of the mirror?
 - b) Is the image inverted or upright?
 - c) If the filament is 25 mm across, how big is the image?
4. 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?
5. Concave mirrors can be used as for shaving or applying make up. The face must be inside the focus. You hold a concave mirror, with a focal length of 40 cm, about 30 cm from your face.
 - a) Where is your image located?
 - b) How much bigger than your face is the image?

6. Find the focus



7. Find the focus



8. A convex mirror is placed on the ceiling at the intersection of two hallways. If a person stands directly underneath the mirror, the person's shoe is a distance of 195 cm from the mirror. The mirror forms an image of the shoe appearing 12.8cm behind the mirror's surface.
- What is the mirror's focal length?
 - What is the magnification of the image?
 - Is the image real or virtual?
 - Is the image upright or inverted?
9. 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.
- What is the magnification of the image?
 - What is the mirror's focal length?
 - What is the distance of the image from the mirror?
 - Is the image real or virtual?
 - Is the image upright or inverted?
10. 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.
- What kind of mirror would do this job?
 - What is the radius of curvature?

11. Penny wishes to take a picture of her image in a plane mirror. If the camera is 1.2m in front of the mirror, at what distance should the camera lens be focused?

12. Draw the ray diagram to find the image

