RRFLECTION AT CURVED SURFACES

1. Most U.S. passenger cars manufactured in recent years have slightly convex side mirrors on the right side.
Suppose your car is equipped with a convex mirror that has a radius of curvature of 7.24 m. How far away will a following car appear to be if it is actually 15.5 m away?

[4m]

2. A candle is placed 15 cm from the vertex of a concave mirror that has a focal length of 10 cm.

a) Locate the position of the image [1m]

b) Find the magnification of the image. [1m]

c) Describe the characteristics of the image.[2m]

[Total 3m]

3. A baby mouse 1.2 cm high is standing 4.0 cm from a converging mirror having a focal length of 300 cm.

a) Locate the position of the image by means of [1m]

b) Determine the height of its image. [1m]

[2m]

4. Determine the image distance and image height for a 5.00-cm tall object placed 45.0 cm from a concave mirror having a focal length of 15.0 cm.
(a) The image distance

[2m]

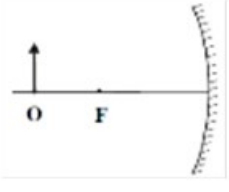
(b) Image height

[1m]

5. Use a ray diagram to show the formation of a real image by a concave mirror.

[3m]

6. Complete the following diagram to show how a concave mirror forms an image of an object O, which is placed outside the focus F of the mirror.



[3m]

7. A 60 cm tall red rose is placed 40 cm from a large convex mirror of focal length 20 cm.
a) Locate the position of the image [1m]

b) Find the magnification of the image. [1m]

c) What is the height of the image? [1m]

d) Describe the characteristics of the image.[1m]

[4m]