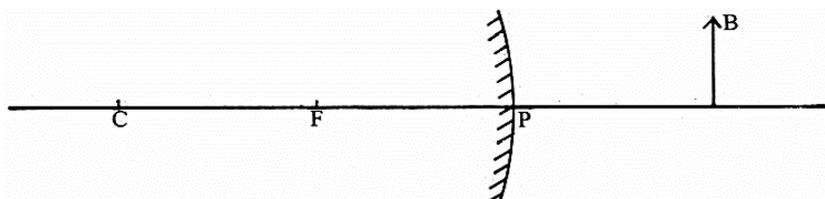


Board – ICSE

Class – 9th

Topic – Reflection of light

- An object is placed 2 cm from a plane mirror. If the object is moved by 1 cm towards the mirror, what will be the new distance between object and image?
- (a) On what factors does the size of an image formed by a pin hole camera depend?
 (b) Copy the above diagram and complete it by drawing two rays to show the formation of the image of the object AB. State the size, position and nature of image formed.



- (a) Write down the letters of the word 'POLEX' as seen in a plane mirror, held parallel to the plane of this paper.
 (b) Name a mirror which always produces an erect and virtual image.
 (c) Distinguish between real and virtual image.
- Give two uses of (i) convex mirrors (ii) concave mirrors.
- (a) Define the term principal focus in case of convex mirror. Draw a convex mirror and show its principal focus and focal length clearly.
 (b) What is the relation between focal length and radius of curvature of concave mirror?
- (a) Draw a neat diagram of reflecting periscope.
 (b) State two advantages and two disadvantages of reflecting periscope.
- A boy stands 4 m away from plane mirror. If the boy moves $\frac{1}{2}$ m towards mirror, what is the distance between the boy and his image? Give a reason for your answer.
- (a) State five characteristics of image formed in plane mirror.
 (a) State three ways, in which image formed in plane mirror differs from image formed in pin hole camera.
- (a) What do you understand by the term lateral inversion?
 (b) A printed card has letters PHYSICS. Show how it would appear in a mirror without showing ray diagram.

10. (a) State the mirror formula for the formation of total number of images formed in two plane mirrors, held at an angle θ .
(b) Calculate the number of images formed in two plane mirrors, when they are held at angle of (i) 72° (ii) 36° .
11. A ray of light strikes a plane mirror, such that angle with the mirror is 20° . What is the value of angle of reflection? What is the angle between incident ray and reflected ray?
12. State the laws of reflection.
13. Draw a neat two ray diagram for the formation of images in two plane mirrors, when mirrors are (i) at right angles to each other (ii) facing each other.
14. Why are infinite images not seen when two plane mirrors are facing each other?
15. State four uses of plane mirror