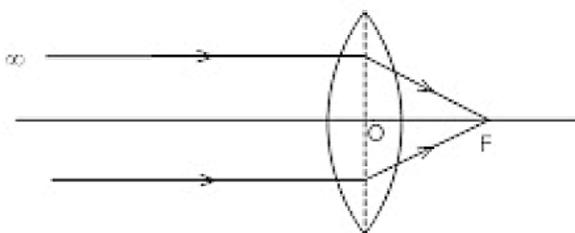


Board – CBSE

Class – 10th

Topic – Light reflection - refraction

1. A beam of rays, parallel to the principal axis, is incident on a convex mirror. Show diagrammatically, the path of these rays after reflection from the mirror.
2. A concave mirror produces three times magnified (enlarged) real image of an object 10 cm in front of it. Where is the image located?
3. In what S.I unit is the power of lens stated? A convex lens has a focal length of 50 cm. calculate its power?
4. Why do we prefer a convex mirror as a rear view mirror in vehicles?
5. A doctor has prescribed a corrective lens of power 1.5 D. Find the focal length of this lens. Is the prescribed lens diverging or converging.
6. A concave mirror produces three times magnified real image of an object placed at 10 cm in front of it. Where is the image located?
7. Write two uses of concave mirror.
8. Draw a ray diagram to represent the nature, position and size of the image formed by a convex lens for the object placed at
 - (a) infinity
 - (b) Between F_1 and optical centre (O)



9. A concave lens has focal length of 20 cm. At what distance from the lens a 5 cm tall object be placed so that it forms an image at 15 cm from the lens? Also calculate the size of the image formed?
10. A convex lens has a focal length of 10 cm. At what distance from the lens should the object be placed so that it forms a real and inverted image 20 cm. away from the lens? What would be the size of the image formed if the object is 2 cm high? With the help of a ray diagram show the formation of the image by the lens in this case?

11. A convex lens forms a real and inverted image of a needle at distance of 50 cm. from it. Where is the needle placed in front of the convex lens if the image is equal to the size of objects? Also, find the power of lens.
12. A convex lens of focal length 15 cm forms an image 10 cm from the lens. How far is the object placed from the lens? Draw the ray diagram.
13. An object 5 cm in length is held 25 cm away from a converging lens of focal length 10 cm. Draw the ray diagram and find the position, size and the nature of the image formed.
14. The size of an object is 2 cm. The magnification produced by a mirror is +1. What is the size of the image?
15. Find the power of a concave lens of focal length 2 m?