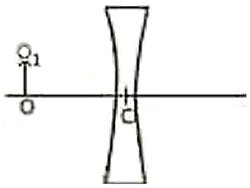
Board – ICSE	Class – 10th	Topic – Refraction of light through lens

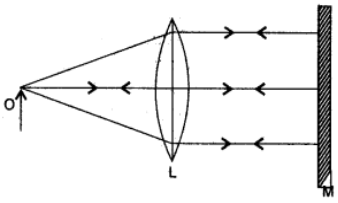
1. Given OC = f, the focal length of the lens. Copy the diagram in your answer book. Draw two rays from the linear object OO_1 and obtain the image formed by the lens.



2. An erect, diminished & virtual image is formed when an object is placed between the optical center and principal focus of a lens –
   (i) Name the type of lens, which forms the above image.
   (ii) Draw a ray diagram to show the formation of the image with the above characteristics.

3. Which physical quantities does the following unit represent – Dioptre. Define it.
4. State three characteristics of the image of an extended source formed by a concave lens.
5. The diagram below shows an object 'O' and its image 'I'. Copy the diagram and draw suitable rays to locate the lens and its focus. Name the type of lens in this case.

6. An object of height 3cm height is placed 2 cm in front of a convex lens of focal length 6 cm. Draw a neat labelled diagram to show the position of the image.
   State the characteristics of the image formed.
7. How does the power of a lens change if its focal length is halved?
8. Name the lens for which magnification can be 1. For what position of the object will the magnification be 1?
9. An object is placed in front of a convex lens such that the image formed has the same size as that of the object. Draw a neat labelled ray diagram to illustrate this
10. Define the Principal focus of a (i) Convex lens and (ii) Concave lens.
11. The given ray diagram illustrates the experimental set up for the determination of the focal length of a converging lens using a plane mirror.
    (i) State the magnification of the image formed.



    (ii) Write two characteristics of the image formed.
    (iii) What is the name given to the distance between

the object and optical centre of the lens in the above diagram?

12. A convex lens is of focal length 20 cm. Find its power.
13. Define 'power of a lens'.