1. A Ray of light falls normally on the mirror, find angle of incidence and angle of reflection?

2. A ray of light makes an angle of 50 degree with the mirror at what angle would it be reflected?

3. A Ray of light makes an angle of 50 degree with the normal. Find the angle of incidence and angle of reflection.

4. An object is kept at a distance of 10 cm from a mirror. At what distance from the mirror will the image be formed?

5. An object is kept at a distance of 20cm from a mirror. What distance from the object will the image be formed?

6. Why are the letters of the word ambulance written in opposite order?

7. An object is kept at a distance of 30cm from a concave mirror of focal length 15cm. Calculate the the nature and position of the image formed?

8. A 2 cm tall needle is kept at a distance of 20cm from a concave mirror of focal length 12 CM. Calculate the nature position and size of the image formed.

9. A 5 cm tall object is kept at a distance of 12 CM from a convex mirror of focal length 20cm. find the nature position and size of the image formed?

10. where should an object be kept in front of a concave mirror of focal length 15cm to get three times enlarged image?

11. Concave mirror form two times magnified real image of an object kept at a distance of 10 centimetre from the mirror. Calculate the focal length of the mirror?

12. A concave mirror forms four times magnified virtual image of an object kept at a distance of 5cm from the mirror. calculate the the focal length of the mirror?

13. Find two possible distances from a concave mirror focal length 8 cm such that a four times magnified image is formed

14. Where should an object be kept in front of a concave mirror to get a-

A) real enlarged image

B) real diminished image

C) virtual enlarged image

D) virtual diminished image

15. A candle if placed at 20cm mark on a metre scale and the concave mirror is placed at 40cm mark. Its real image is formed at 15cm mark. Find the focal length of the mirror. Draw necessary ray diagram.

At what point on the metre scale the image would have formed if the object was kept at 8 cm mark?

16. an object is kept at a distance of 10cm from a convex mirror of focal length 15 CM. Calculate the nature and position of the image formed.

17. Where should an object be kept in front of a convex mirror of focal length 10 cm to get an image half the size of the object?

18. A convex mirror produces an image one fifth the size of the object kept at a distance of 20cm from it .calculate the focal length of the mirror?

19. The speed of light in glass is $2 * 10\ ^{8}$ metre per second. Find the refractive index of glass?

20. The refractive index of water is 1.33. find the speed of light in water?

21. The refractive index of water is 1.33 and the refractive index of diamond is 2.42. find the refractive index of water with respect to diamond?

22. The refractive index of kerosene oil is 1.46. what do you understand by the statement?

23. Arrange the following media in the increasing order of speed of light in them-

Kerosene.   1.46

Diamond.   2.42

Air.   1

Water.   1.33

Glass.   1.5

Also arrange the above media in the decreasing order of their optical density.

24. The wavelength of light in air is 500 nm. It moves from air to glass (n=1.5). Calculate the speed frequency and wavelength of light in glass?

25. Find the the position and nature the image formed when an object is kept in front of a convex lens of focal length 15cm kept at a distance of 20cm.

26. 4 centimetre tall pin is kept at a distance of 20cm from a convex lens focal length 10 cm. .

Find the size nature and position of the image formed?

27. An object is kept at a distance of 16 cm from a concave lens of focal length 30cm. Find the nature and position of the image formed.

28. A convex lens forms three times magnified image of an object kept at a distance of 20cm from it, find the focal length of the lens if the image is real. What would have been your answer if the image is virtual?

29. Where should an object be kept in front of a convex lens of focal length 18 cm so as to get a four times magnified real image.

30. Where should an object be kept in front of a convex lens of focal length 10 cm to get three times magnified image.

31. When an object is kept in front of a lens of focal length 16cm its it's diminished virtual image is formed such that the size of the image is half the size of the object. Find the nature of the lens, find the distance of the object from the length.

32. Where should an object be kept in front of a convex lens to get

     A) a real magnified image

     B) a virtual magnified image

     C) virtual diminished image

     D) virtual enlarged image

33.A Convex lens is kept at 58cm mark on a metre scale. A candle is kept on 40cm mark on the scale and the images formed at 72 CM mark. Find the focal length of the convex lens, draw necessary ray diagram.

34. Calculate the power of a lens focal length is 20cm.

35. Calculate the power of a convex lens of focal length 18 cm and a concave lens of focal length 15 CM.

36. Power of a lens is - 5D. Find its focal length.

37. Two lenses of focal length minus 15 cm and + 30 cm are combined. Find the power of the combination.