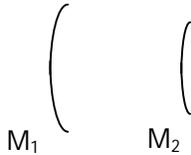


03. REFLECTION OF LIGHT BY DIFFERENT SURFACES

- Where the image is formed when an object is placed on the principle axis of a concave mirror between the centre of curvature and focus. What is the character of the image? Explain with a neat ray diagram.
- The focal length of a convex mirror is 20cm. If an object is placed at 40 cm before the mirror, where should be the image collected? What are the properties of the image?
- Two spherical mirrors are obtained from a same spherical substance. Which mirror has more focal length ? Either M_1 or M_2 ?



- Write the mirror formula. Explain the terms in it.
- When a light ray incident parallel to the axis of a mirror , what is the path of the reflected ray?
- Read the following conversation.

Teacher : “If you want to collect virtual image, which mirror do you select?”. Bharathi: “convex mirror”

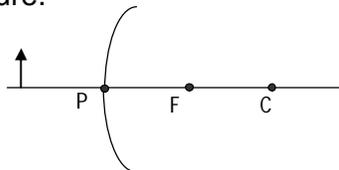
Sowmya: “concave mirror”

Firoz : “plane mirror”

What do you think ? Who is correct ? **Explain**cs.weebly.com



- Name the mirrors that form the images behind the mirrors.
- If $m = -1.5$, which mirror it is?
- What type of image is formed due to convergent beam of light rays?
- Identify the mirror shown in the figure.



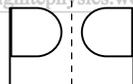
- What is the relation between angle of incidence and angle of reflection when reflection takes place?
- If $m = 1.5$ then
 - Which mirror it is?
 - What is the place of the object?
 - Where should be the image collected?
 - What are the properties of image?

13. Virtual, erect and enlarged image is formed by a concave mirror. What is the place of the object?
14. Write any four situations that you had observed virtual images in your daily life.
15. Jagruthi made an experiment and find out the focal length of a concave mirror as 20cm. Prakash made an experiment with same mirror and identified the centre of curvature as 40 cm. Then who is correct?
- Note:** The image of the object which is at infinite distance was formed at 20cm by the concave mirror.

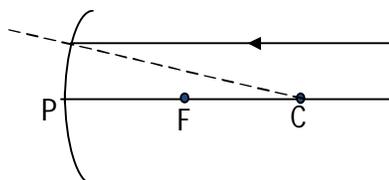
16. If you want to get diminished and real image, which mirror do you select?
17. The ENT doctors use concave mirrors. Why?
18. A concave mirror produces three times enlarged and real image of an object placed at 10cm in front of that mirror. Where is the image formed? Is it erect or inverted?
19. No matter that how far you stand in front of a mirror, it always forms erect image. Can you guess the type of mirror?
20. Name the type of mirrors which are useful in the following situations.
- (i) In solar cooker
 - (ii) For ENT specialist doctors
 - (iii) In head lights of a vehicle
 - (iv) As rear view mirrors in vehicles



21. Write English alphabet. Draw the mirror images of the letters as shown below.



22. Draw the diagrams of concave and convex mirrors. Indicate P, F and C in them.
23. The focal length of a concave mirror is 10cm. If an object is placed at 20cm distance before the concave mirror, where should be the image collected?
24. The teacher asked James a question. James replied the correct answer as, " $R = 2f$ ". Can you guess, what is the question?
25. If a concave mirror formed real, inverted and diminished image, then
- (i) Where was the object placed?
 - (ii) Where should be the image formed?
26. The incident ray for a concave mirror is given. Draw the reflected ray.



NAGA MURTHY- 9441786635
 Contact at : nagamurthysir@gmail.com
 Visit at : ignitephysics.weebly.com

27. The magnification of a mirror is -0.7 . Then

- (i) Is the image small or big?
- (ii) Is the image erect or invert?
- (iii) Is the image virtual or real?
- (iv) Which type of mirror it is?

28. Kavitha wants to determine the focal length of a concave mirror. Suggest her the list of apparatus or material needed for that experiment?

29. An object is placed at a distance of 10 cm in front of a concave mirror. The focal length of the mirror is 5 cm. Then find the place of the image. Write the properties of the image.

30. Write any four situations that we use spherical mirrors.

31. Why the name on the Ambulance printed in reverse order ?

