

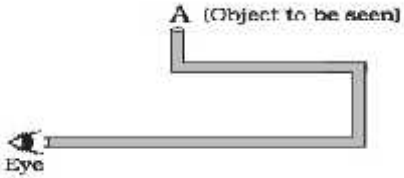
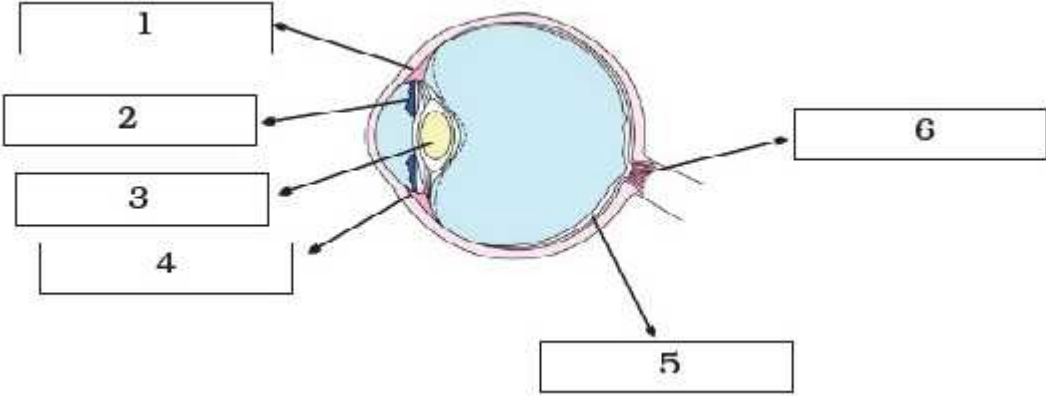


INDIAN SCHOOL DARSAIT
SCIENCE– Class VIII
Topic: Light

Worksheet : 1
Prepared By: Sujisha Sumith
Date :

Name of the student :
Class : VIII

<u>Multiple Choice Questions</u>	
1.	What kind of lens is there in our eyes Where does it form the image of an object
2.	How many images of an object will be formed when the object is placed between two plane mirrors inclined at an angle of (a) 180° (b) 60
3.	Name the defect of vision by which a person find it difficult to see the distant objects clearly though his near vision is perfect.
4.	The distance between the object and the image formed by the plane mirror is 24 cm What will be the distance between object and the mirror
5.	Name the following: a) The cells on retina which are sensitive to bright light. b) Ability of our eye by which we cannot distinguish between stationary objects when their images are flashed in less than $1/16^{\text{th}}$ of a second.
<u>Short answer type questions</u>	
6.	Give reason: a) We cannot see our surroundings clearly when we enter a room from bright sunshine. b) In old age eye sight becomes foggy.
7.	What do you mean by brail script? How does it helpful to visually challenged people?
8.	i) An incident ray makes an angle 35° with the surface of a plane mirror .What is the angle of reflection? ii) Rahul is observing his image in a plane mirror. The distance between the mirror and his image is 4m.If he moves 1m towards the mirror, then the distance between David and his image will be:
9.	Aman has planned an activity to observe an object at A through pipes as shown in the figure so that he could see objects which cannot be seen directly.

	 <p>i) Identify the instrument. ii) How many mirrors should he use in this set up to see object? iii) Write the basic principle underlying such instruments. iv) If any one of the mirrors is removed will he be able to see the object?</p>
10.	<p>Label the diagram:</p> 
11.	<p>State whether the following statements are true or false. If false correct the statements.</p> <p>a) The splitting up of white light into seven different colours is called dispersion. b) The type of lens present in our eye is concave which is thinner at the centre. c) The night birds have large number of rods on their retina than cones. d) The size of pupil will be small in bright light</p>
	<p><u>Long answer type questions</u></p>
12.	<p>Describe in brief the construction of a kaleidoscope</p>
13.	<p>What are the functions of following part of eye: i) Ciliary muscles ii) iris c) retina d) optic nerve</p>
14.	<p>With the help of a well labelled diagram, State laws of reflection of light.</p>
15.	<p>Differentiate between regular and irregular reflection with the help of suitable diagram.</p>
16.	<p>Suggest some methods to maintain your eyes healthy.</p>

Five mark questions

Name the type of mirror(s) that should be used to obtain

- (i) A diminished and virtual image of an object
- (ii) A magnified and virtual image of an object.

Draw labelled ray diagrams to show the formation of required image in each of the above two cases. Which of these mirrors could also form a magnified and real image of the object?

1.	
2.	$f = R/2$ it will form a convex mirror.

3.	Positive sign of magnification indicates that the image is virtual ,erect and enlarged.
4.	
5	
6	
7	$f = -1.5 \text{ m}$ $u = -40 \text{ cm} = 0.4 \text{ m}$ $\frac{1}{f} = \frac{1}{u} + \frac{1}{v}$ $\frac{1}{v} = 1/0.4 - 1/1.5 = 1.83$ $V = 0.545 \text{ m}$ V is positive so the image is virtual and it is formed at a distance of 55 cm behind the mirror.
8	
13.	$R = 3 \text{ m}$ $f = R/2$ $= 1.5 \text{ m}$ $u = -5 \text{ m}$ $\frac{1}{f} = \frac{1}{u} + \frac{1}{v}$ $1/v = 1/1.5 - 1/(-5)$ $V = 1.15 \text{ m}$ $M = h_i/h_o$ $= -v/u$ $= 0.23$ The image is virtual erect and diminished in size by the factor of 0.23