

Grade 7 Light Worksheets

A. Fill in the blanks:

1. An image that cannot be obtained on a screen is called
2. Image formed by a convex is always virtual and smaller in size.
3. An image formed by a mirror is always of the same size as that of the object.
4. An image which can be obtained on a screen is called a image.
5. An image formed by a concave cannot be obtained on a screen.

B. State 'True' or 'False':

1. We can obtain an enlarged and erect image by a convex mirror.
.....
2. A concave lens always forms a virtual image.
3. We can obtain a real, enlarged and inverted image by a concave mirror.
.....
4. A real image cannot be obtained on a screen.
5. A concave mirror always forms a real image.

C. Match the following:

'A'	'B'
1. A plane mirror	a. Used as a magnifying glass.
2. A convex mirror	b. Can form image of objects spread over a large area.
3. A convex lens	c. Used by dentists to see enlarged image of teeth.
4. A concave mirror	d. The image is always inverted and magnified.
5. A concave lens	e. The image is erect and of the same size as the object.
	f. The image is erect and smaller in size than the object.

D. Answer the following questions in short:

1. State the characteristics of the image formed by a plane mirror.
2. Find out the letters of English alphabet or any other language known to you in which the image formed in a plane mirror appears exactly like the letter itself. Discuss your findings.
3. What is a virtual image? Give one situation where a virtual image is formed.
4. State two differences between a convex and a concave lens.
5. Give one use each of a concave and a convex mirror.
6. Which type of mirror can form a real image?
7. Which type of lens forms always a virtual image?
8. Define reflection of light.
9. Why the word 'AMBULANCE' is written inverted?

10. You are given concave, convex and plane mirrors. How will you identify each one of them?

11. Why shouldn't we look at the Sun through convex lens?

E. Tick (✓) the correct option:

1. A virtual image larger than the object can be produced by a:

- (a) concave lens
- (b) concave mirror
- (c) convex mirror
- (d) plane mirror

2. David is observing his image in a plane mirror. The distance between mirror and his image is 4 m. If he moves 1 m towards the mirror, then the distance between David and his image will be:

- (a) 3 m
- (b) 5 m
- (c) 6 m
- (d) 8 m

3. The rear view mirror of a car is a plane mirror. A driver is reversing his car at a speed of 2 m/s. The driver sees in his rear view mirror the image of a truck parked behind his car. The speed at which the image of the truck appears to approach the driver will be:

- (a) 1 m/s
- (b) 2 m/s
- (c) 4 m/s
- (d) 8 m/s

4. Which of the following is not a luminous object?

- (a) Sun
- (b) Moon
- (c) Candle
- (d) Bulb

5. Magnifying glass is a:

- (a) concave lens
- (b) convex lens
- (c) can be both
- (d) none of these

F. Visit a nearby hospital. You can also visit the clinic of an ENT specialist, or a dentist. Request the doctor to show you the mirrors used for examining ear,

nose, throat and teeth. Can you recognise the kind of mirror used in these instruments?

G. Form the image by a concave mirror for object placed at different distances from it and record your observations in the table given below:

Distance of the object from the mirror	Smaller/larger than the object	Character of the image	
		Inverted/erect	Real/virtual
50 cm		...	...
40 cm		...	...
30 cm			
20 cm			
10 cm		...	
5 cm			