

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Light

Q1. 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.

Ans. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Q2. What is the difference between an object and an image?

Ans. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Q3. David is observing his image in a plane mirror. The distance between the mirror and his image is 4 m. If he moves 1 m towards the mirror, then find out the distance between David and his image.

Ans. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Light

Q1. 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.

Ans. Image of letters of English alphabet such as A, H, I, M, O, T, U, V, W, X, Y formed in a plane mirror appears exactly like the letter itself. Vertical symmetry is found in the letters A, H, I, M, O, T, U, V, W, X and Y. This means that the right side is a reflection of the left.

Q2. What is the difference between an object and an image?

Ans. Place a lighted candle in front of a plane mirror. Try to see the flame of the candle in the mirror. It appears as if a similar candle is placed behind the mirror. The candle, which appears behind the mirror, is the image of the candle formed by the mirror. The candle itself is the object.

Q3. David is observing his image in a plane mirror. The distance between the mirror and his image is 4 m. If he moves 1 m towards the mirror, then find out the distance between David and his image.

Ans. Distance between the mirror and David's image is 4m.

If the David moves 1 m towards the mirror, then the distance between mirror and David's image will be  $(4 - 1) \text{ m} = 3\text{m}$

We know that in case of plane mirror image is at the same distance behind the mirror as the object is in front of it. Therefore,

Distance between David and mirror = Distance between mirror and David's image

So, Distance between David and his image = Distance between David and mirror + Distance between mirror and David's image (i.e.  $3 + 3 = 6 \text{ m}$ )