SCIENCE

MULTIPLE REFLECTION

✤ MULTIPLE REFLECTIONS

A plane mirror forms an image of an object placed before it. This is the result of a single reflection of light. What happens if the object is placed between two mirrors that are at an angle to each other ? Let us find out.

Each of the mirrors will form an image due to reflection. Each of these images is formed by a single reflection. These images are laterally inverted. In addition, an image is formed at the edge where the mirrors meet. This image is formed by rays that get reflected twice. As a result, this image is not laterally inverted. So, the left and right sides of the arrow and the word 'left' appear the correct way round in this image.



NOTE : The number of images of an object placed between two mirrors can be found from the following formula.

Number of images = $\frac{360^{\circ}}{\text{angle between mirrors}} - 1$

When the angle between the mirrors is 90°, the number of images is $(360^{\circ}/90^{\circ}) - 1 = 4 - 1 = 3$. Similarly, when the angle is 60°, the number of images is $(360^{\circ}/60^{\circ}) - 1 = 6 - 1 = 5$.