

Light

Reflection of Light: Reflection of light occurs when a ray of light approaches a smooth surface and bounces back.

Refraction of light: When a ray of light travels from one medium to another medium, it bends. This phenomenon is known as refraction of light.

Images are of two types.

- (i), Real image
- (ii), virtual image

Real images: (i), those images which are formed on a screen are real images.

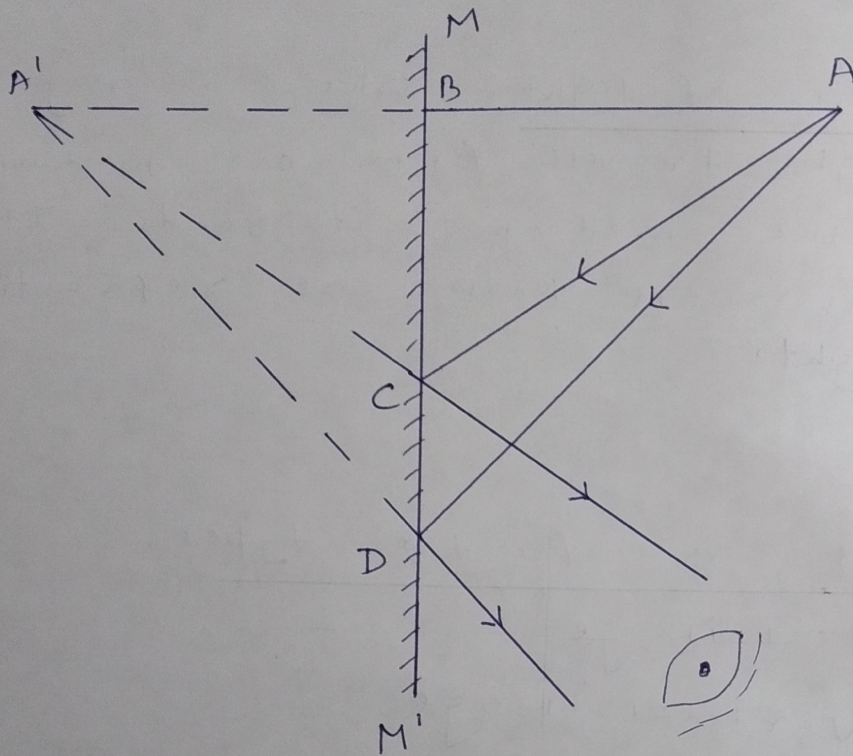
- (ii), Real images are always inverted
- (iii), eg. image formed on pin hole camera

Virtual image: (i), those images which do not need any screen are known as virtual image.

- (ii), virtual images are always erect

- (iii) eg. when you see your own image in front of a plane mirror.

Image formation in a plane mirror



MM' = plane mirror

AB = object distance

$A'B$ = image distance

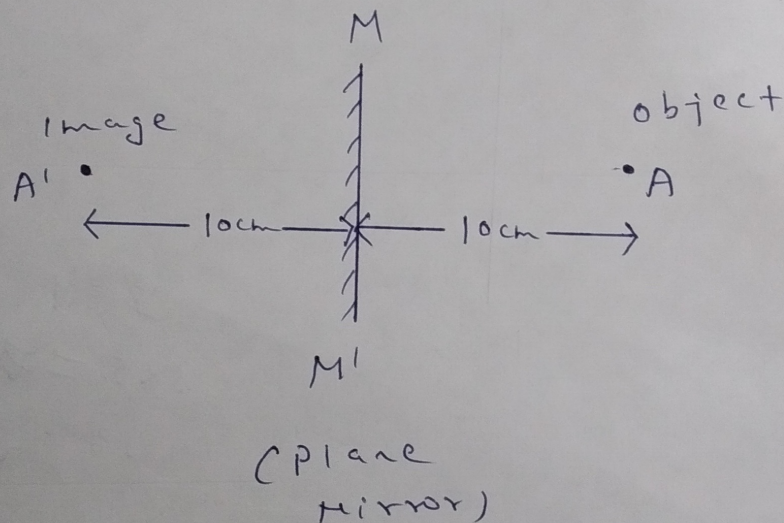
In plane mirror

object distance from mirror
is equal to image distance
from the mirror.

Q An object is at a distance of 10cm in front of a plane mirror. (i) How far is the image from the mirror?

(ii) What is the distance between object and the image

Sol:



(i) object distance from mirror = 10cm
Image distance from mirror = 10cm

(ii) Distance between object and the image = 10cm + 10cm
= 20cm