Light - Reflection and Refraction Sign Convention of Spherical Mirror

SIGN CONVENTION FOR MEASURING DISTANCE IN CONCAVE & CONVEX MIRROR :

(i) All distances are measured from the pole.

(ii) The incident ray is taken from left to right.

(iii) Distances measured in the same direction as that of the incident ray are taken to be +ve.

(iv) Distances measured in a direction opposite to the incident ray are taken to be -ve.

(v) Distances measured upwards and perpendicular to principal axis are taken +ve.

(vi) Distance measured downwards and perpendicular to principal axis are taken -ve.



Focal length concave mirrro is - ve Focal length of convex mirror is + ve

IMPORTANT : These sign are according to the rectilinear co-ordinate system.

NOTE: Always draw a rough ray diagram while solving a numerical problem. Otherwise, we will be confused

as to which distance should be taken as +ve & which -ve.

For virtual image : M is +ve [as virtual image is erect \therefore h₂ is +ve as well as h₂ is +ve

For real image : m is -ve [as real image is always inverted \therefore is -ve while h₁ is +ve]