- **An object is placed 8 cm away in front of a concave mirror of focal length 5 cm. Find out the position of image and magnification. Find out whether the image is inverted or erect by drawing the ray diagram on a graph paper.**

$f = -5$ cm, $u = -8$ cm $v = ?$

$$v = \frac{fu}{u-f} = \frac{-5 \times -8}{-8-(-5)}$$

$$= \frac{40}{-3} = -13.33 \text{ cm}$$

$$\text{Magnification} = -\frac{v}{u} = -\frac{-13.33}{-8}$$

$$= -1.66 = -1.67$$

Position of image : Beyond C
Features : Real and inverted

Scale : x-axis 1 div = 1cm