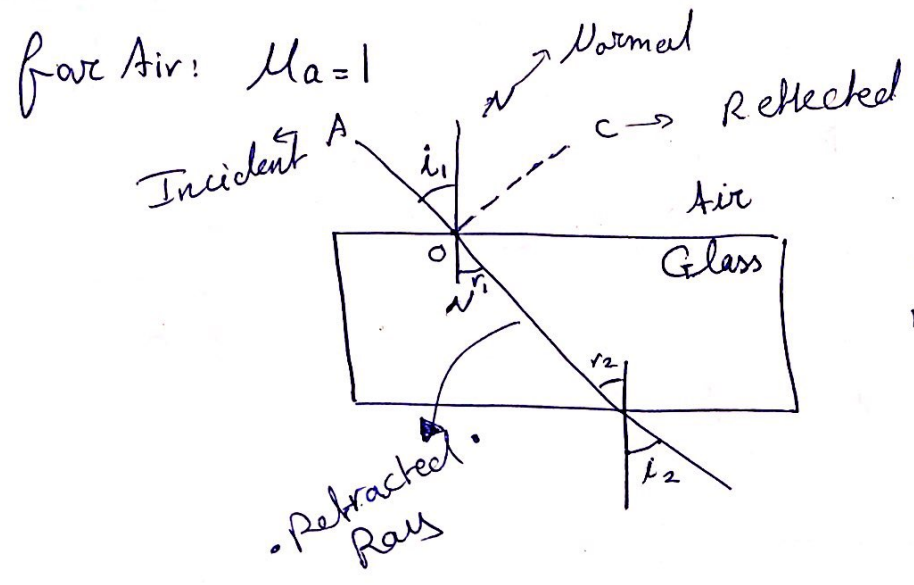


Exp 6 - Index of Refraction

$$n = \frac{c}{v}$$

c → speed of light in vacuum
 v → speed of light in medium

The light bends when moving from a medium to another



i = angle of incidence
 r = angle of Refraction

Snell's law: $\mu_a \sin(i) = \mu_g \sin(r)$

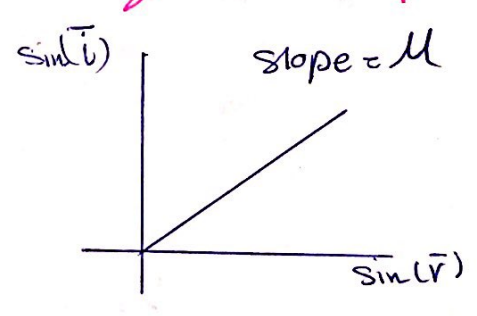
← Angle of incidence
 → angle of Refraction

$\mu_a = 1$

$$\sin(i) = \mu_g \sin(r)$$

μ_g is the slope

$$\mu_g = \frac{\sin(i)}{\sin(r)}$$



$$\frac{\Delta \mu_g}{\mu_g} = \frac{\Delta \sin(i)}{\sin i} + \Delta \frac{\sin r}{\sin r}$$

$$\frac{\Delta \mu_g}{\mu_g} = \frac{\cos(i) \Delta i}{\sin i} + \frac{\cos r \Delta r}{\sin r}$$

Δi and Δr in radians

By estimation

Uaa Etaiwi