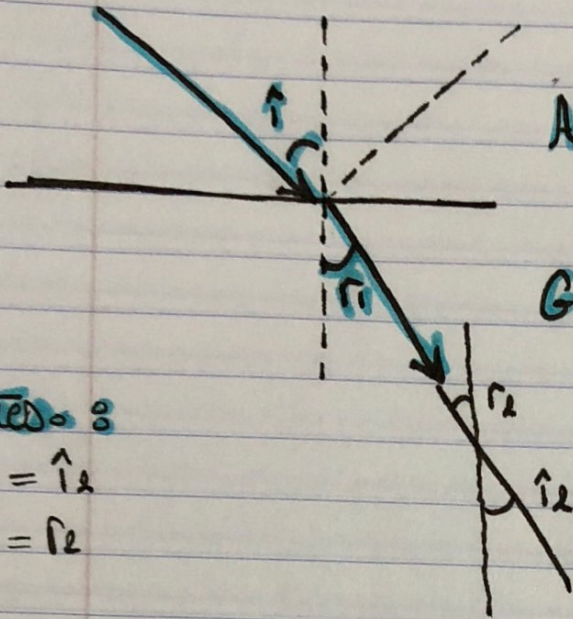


Exp 6: Index of Refraction.

سبب انحراف الضوء:



Air

سرعة انتشار الضوء في كل وسط

Glass

لحيث ان لكل مادة معامل انحراف يعتمد على سرعة الضوء فيها

Then:

$$i_1 = i_2$$

$$r_1 = r_2$$

$$\mu = \frac{\text{Speed of Light in vacuum.}}{\text{speed of Light in Medium.}}, \quad \mu = \frac{c}{v}$$

$$\mu \geq 1$$

NOTE: The light bends when it's move's from Medium to Another.

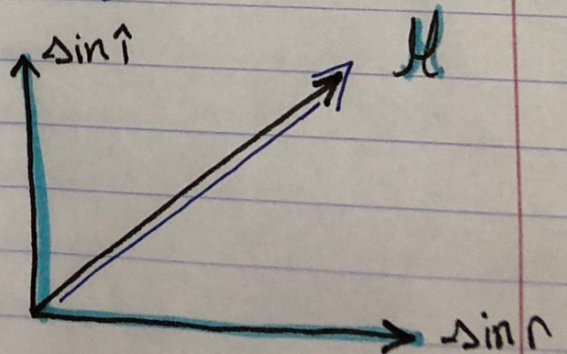
Snell's law:

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

index of refraction in Air Angle of incidence index of refraction in Glass Angle of refraction.

$$\mu_{\text{air}} \approx 1$$

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



UNC_g ?

$$\frac{\Delta g}{g} = \frac{\cos \hat{i}}{\sin \hat{i}} \Delta \hat{i} + \frac{\cos \hat{r}}{\sin \hat{r}} \Delta \hat{r}$$

$\Delta \hat{i}, \Delta \hat{r}$

By estimation.