PHYS222
Reflection & Refraction

-Presentation of Results

Law of Reflection

Ray	θ_i (degrees)	θ_r (degrees)
1	$\theta_i \pm \delta\theta$	$\theta_r \pm \delta\theta$
2	$\theta_i \pm \delta\theta$	$\theta_r \pm \delta\theta$

Index of Refraction

$n_{aver} \pm \delta n$

Lab students should have a total of four [two for each lab partner] indices (or indexes) of refraction. The uncertainty, δn can be approximately estimated as follows.

$$\delta n = \frac{n_{high} - n_{low}}{2}$$

Total Internal Reflection

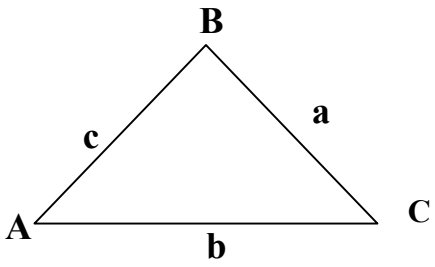
Critical angle (θ_c) calculated-

Theta incidence 1 (θ_{i1})- Theta incidence 2(θ_{i2})-

Image of Plane Mirror

Property	Object	Image
Angle **A**	45 degrees	
Angle **B**	90 degrees	
Angle **C**	45 degrees	
Side **a**	7 cm	
Side **b**	9.9 cm	
Side **c**	7 cm	

Labels used for image (triangle):



Labels used for total internal reflection triangle: