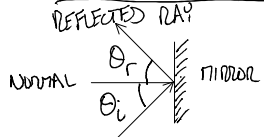


Thursday, May 29, 2014 4:04 PM

LAB 8: REFLECTION & REFRACTION



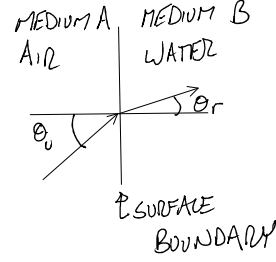
REFLECTED RAY
NORMAL
INCIDENT RAY
 θ_i & θ_r ARE MEASURED FROM THE NORMAL

LAW OF REFLECTION

$\theta_i = \theta_r$
WHERE θ_i = ANGLE OF INCIDENT
 θ_r = ANGLE OF REFLECTION

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

WHERE n = INDEX OF REFRACTION
 c = SPEED OF LIGHT IN A VACUUM
 v = SPEED OF LIGHT IN A GIVEN MEDIUM

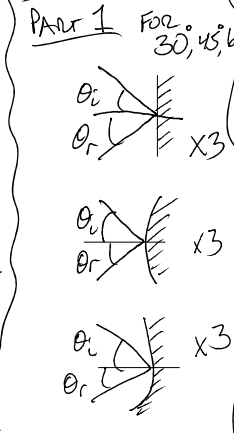


MATERIAL	n
AIR	≈ 1
WATER	≈ 1.33
ALCOHOL	≈ 1.49

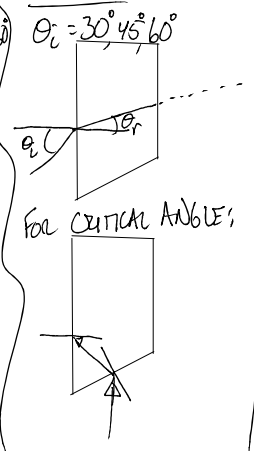
LAW OF REFRACTION

$n_i \sin \theta_i = n_r \sin \theta_r$
IF $n_r > n_i$
REFRACTED RAY BENDS TOWARD NORMAL
IF $n_r < n_i$
REFRACTED RAY BENDS AWAY NORMAL
WHEN $\theta_i \rightarrow \theta_r = 90^\circ$
 $\theta_{critical} = \sin^{-1}(\frac{n_r}{n_i})$

EXPERIMENT



PART 2



REPORT

- COVERAGE
 - MIRROR TRACKS
 - DIFFRACTION TRACKS
 - TABLES
 - PLOT $\sin \theta_i$ vs $\sin \theta_r$
- PLOT GOES THROUGH ORIGIN