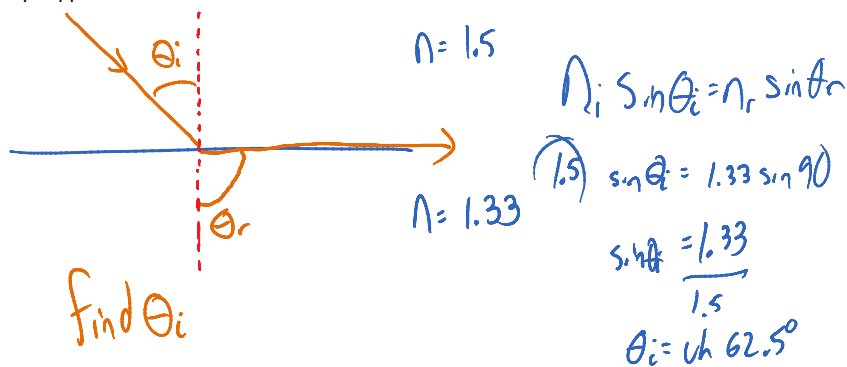


# Critical Angle and Total Internal Reflection

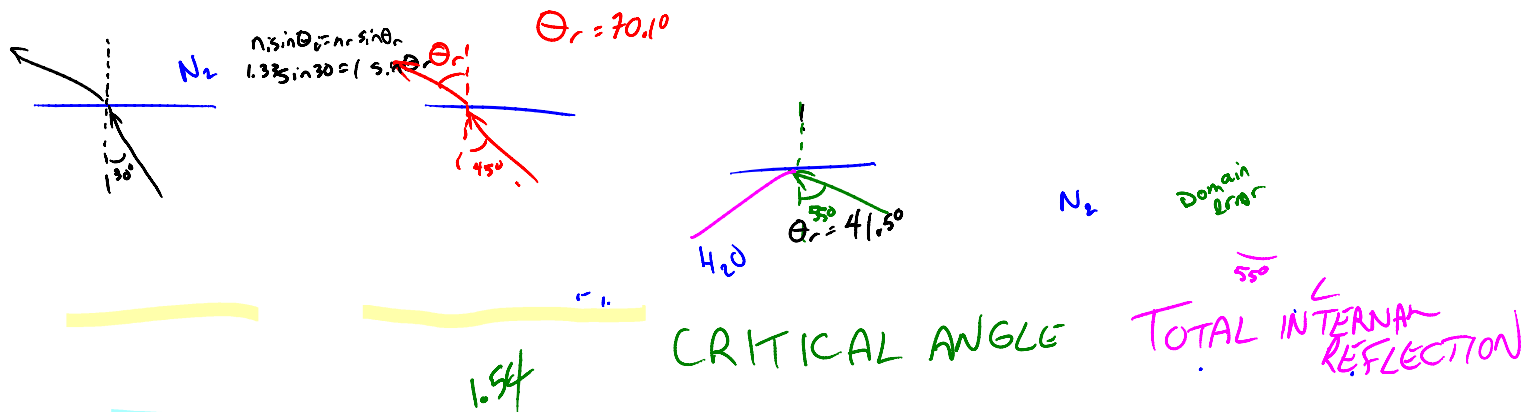
Monday, May 30, 2011  
9:43 AM

$\theta_r = 90^\circ$   
 $\theta_i \leftarrow$  critical angle  
 When a refracted angle is  $90^\circ$  we call the incident angle the critical angle. This can only happen if  $n_i > n_r$



At any incident angle greater than the critical angle all light is reflected internally by the law of reflection and is called total internal reflection.

Determine the critical angle for light travelling from quartz to water.



find the critical angle for light travelling from apple juice ( $n=1.40$ ) into mineral oil ( $n=1.36$ )  
 $\theta_c = 76.3^\circ$