P #15

Ch 22 - pg 708

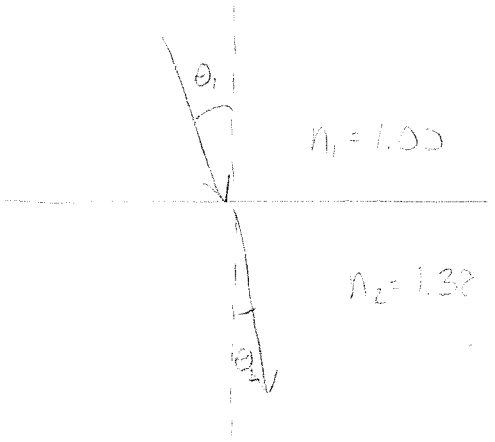
$n_1 = 1.00$ (air)
$\theta_1 = 23.1°$

Find n_2:

$$n_2 = \frac{c}{v_2} = \frac{3.00 \times 10^8 \text{ m/s}}{2.17 \times 10^8 \text{ m/s}}$$

$$n_2 = 1.38$$

Find θ_2:



$$n_1 \cdot \sin\theta_1 = n_2 \cdot \sin\theta_2$$

$$(1.00)(\sin 23.1°) = (1.38) \cdot \sin\theta_2$$

$$\boxed{\theta_2 = 16.5°}$$