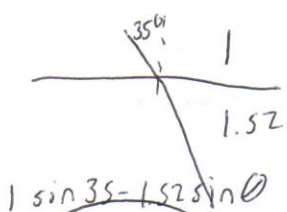


(26)



$n = \sqrt{v}$
 $1.52 = 3E8/v$
 $v = 197368421$

$\sin \theta_c = \frac{n_{\text{little}}}{n_{\text{big}}}$
 $\sin \theta_c = \frac{1}{1.52}$
 $\theta_c = 41.1^\circ$

$1 \sin 35 = 1.52 \sin \theta$
 $\theta = 22.1$

(27)

$$100 \mu\text{C} \left(\frac{1 \times 10^{-6} \text{ C}}{1 \mu\text{C}} \right) \left(\frac{1 \text{ e}^-}{1.6 \times 10^{-19} \text{ C}} \right) = 6.25 \times 10^{14} \text{ e}^-$$

(29)

$$F = \frac{9E9 (26 \times 1.6 \times 10^{-19}) (1.6 \times 10^{-19})}{(1.5 \times 10^{-12})^2}$$

$F = 0.00266 \text{ N}$

(30)

$$2 \times 10^{-12} = \frac{9E9 (1.6 \times 10^{-19}) (1.6 \times 10^{-19})}{r^2}$$

$r = 1.1 \times 10^{-8} \text{ m}$