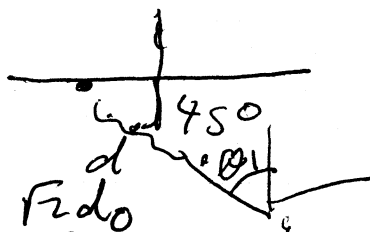


Ch 3, 3 $d_0 = 0.347 \text{ nm}$

$$2d_0 \sin \theta = n\lambda \quad \theta = 34^\circ$$

a) $\lambda = 2 \cdot 0.347 \text{ nm} \quad \sin 34^\circ \quad n = 1$

b)



$$d_1 = \frac{R d_0}{\sin \theta_1} = \frac{R}{\sin \theta_1} \cdot 0.347 \text{ nm}$$

$$2d_1 \sin \theta_1 = \lambda$$

$$\sin \theta_1 = \frac{\lambda}{2d_1}$$

$$\theta_1 =$$

$$\theta_{\text{surface}} = \theta_1 + 45^\circ$$