

11. (a) We use Eq. 36-14 with  $m = 3$ :

$$\theta = \sin^{-1} \left( \frac{m\lambda}{d} \right) = \sin^{-1} \left[ \frac{2(550 \times 10^{-9} \text{ m})}{7.70 \times 10^{-6} \text{ m}} \right] = 0.216 \text{ rad} .$$

- (b)  $\theta = (0.216)(180^\circ/\pi) = 12.4^\circ$ .