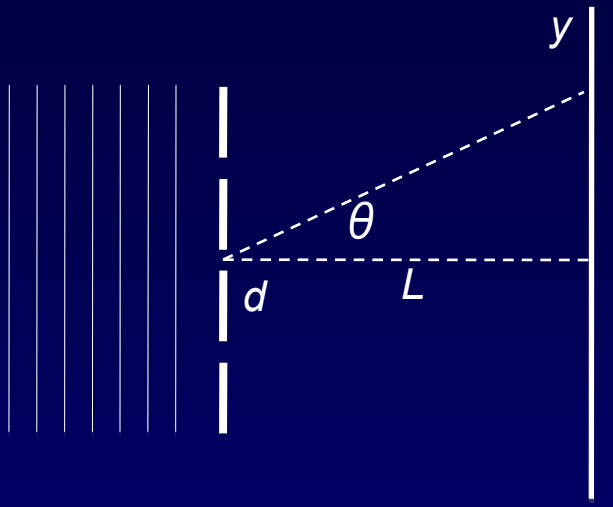
Multiple-slit Example

Three narrow slits with equal spacing *d* are at a distance L = 1.4 m away from a screen. The slits are illuminated at normal incidence with light of wavelength λ = 570 nm. The first principal maximum on the screen is at y = 2.0 mm.



1. What is the slit spacing, *d*?

2. If the wavelength, λ, is increased, what happens to the width of the principal maxima?

3. If the intensity of each slit alone is I_1, what is the intensity of the secondary maximum?