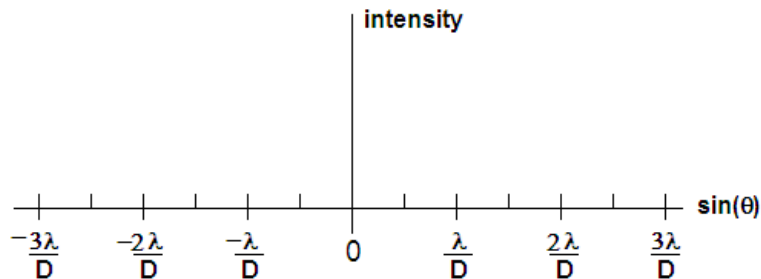


Physics II

Double Slit

Problem 1.- Sketch the intensity of light observed in the double-slit experiment. D is the distance between slits, the light wavelength is λ and $\sin(\theta)$ is the sine of the deflected angle.



Problem 2.- Two slits are scratched on an opaque slide and are separated by 0.08 mm. They are illuminated by light from a laser pointer (wavelength $\lambda = 632nm$).

- (a) Calculate the angle between two bright interference fringes.
- (b) Estimate the separation between two bright fringes on a screen located $L=2.5$ meters from the slits.

Problem 3.- What happens to the interference pattern of double slits when you reduce the distance between the slits?