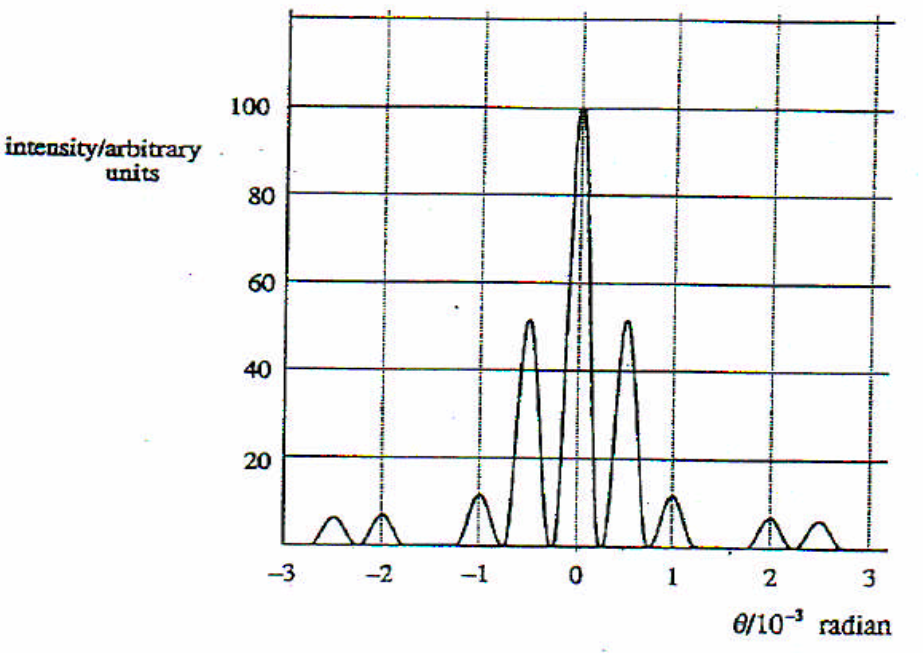
Chapter 6
Short answer question

This question is about the diffraction and superposition of light.

A parallel beam of yellow light of wavelength 600 nm falls normally on two parallel slits, a distance *s* apart.

The graph above shows the way in which the intensity on a distant screen varies with the angle, *q*.



(a) Use measurements from the graph to show that the separation of the slits is 1.2mm.

(b) Why is there a maximum missing at $q = 1.5 \times 10^{-3}$ radian?

(c) Calculate the width of each slit.

(d) One of the slits is covered up. On the axes below draw, as accurately as you can, the graph of the resulting intensity against q . (Use the same intensity scale as on the previous graph.)