5. The path difference is related to the distance between the slits, d, the distance from the cener point on the screen, y, and the distance between the screen and the slits, x, by

$$\text{path difference} = d\,y\,/\,x$$

For constructive interference the path difference must be an integer multiple of the wavelength. We are interested in the second bright line from the central bright line, so the integer is 2. Therefore we have

$$2\ \lambda = d\,y\,/\,x$$

Multiplying both sides of the equation by x and dividing by d isolates the desired quantity, y, as

$$y = (2\,x)\,\lambda\,/\,d$$

$$y = 2\,(0.9\text{ m})\,(570 \times 10^{-9}\text{m})\,/\,(0.4 \times 10^{-3}\text{ m})$$

$$y = 2.57 \times 10^{-3}\text{ m} = 2.57\text{ mm}$$