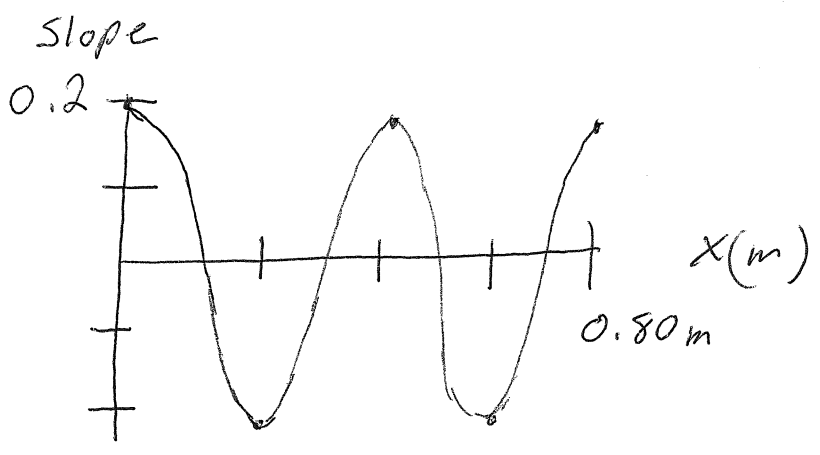


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The plot above gives the slope of a string that is carrying a wave at $t = 0$.

What is the amplitude?

$$\lambda = 0.40\text{m from graph}$$

$$y(x,t) = y_m \sin(kx - \omega t)$$

$$\frac{dy(x,t)}{dx} = ky_m \cos(kx - \omega t)$$

(2)

$$\frac{d y(x,t)}{dx} = 0.2 \quad \text{from Graph}$$

maximum

$$0.2 = k y_m$$

$$k = \frac{2\pi}{\lambda}$$

$$= \frac{2\pi}{\lambda} y_m$$

$$y_m = 0.2 \left(\frac{0.40\text{m}}{2\pi} \right)$$

$$= 1.27 \text{ E-2 m}$$

1.3 E-2 m