

P # 43

Ch 13 - pg 421

$$\begin{aligned}l &= 4.00 \text{ m} \\m &= .200 \text{ kg} \\t &= .800 \text{ sec}\end{aligned}$$

$$\begin{aligned}d &= 4 \times 2 \times l \\&= 8 \cdot (4.00 \text{ m}) \\d &= 32 \text{ m}\end{aligned}$$

$$\mu = \frac{.200 \text{ kg}}{4.0 \text{ m}} = .05 \text{ kg/m}$$

$$v = \frac{d}{t} \quad \text{and} \quad v = \sqrt{\frac{F}{\mu}}$$

$$\frac{d}{t} = \sqrt{\frac{F}{\mu}}$$

$$\frac{32 \text{ m}}{.800 \text{ sec}} = \sqrt{\frac{F}{.05 \text{ kg/m}}}$$

$$F = 80 \text{ N}$$