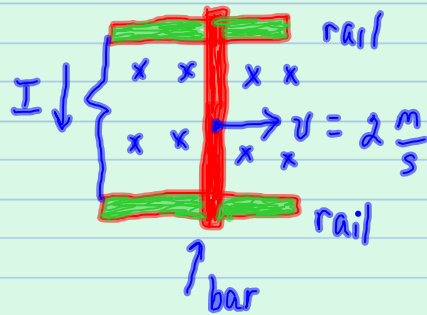


20.3



rail + bar  
conductors

$$B = .25 T$$

$$l = .5 m$$

$$\mathcal{E} = ?$$

$$\mathcal{E} = Blv \sin \theta$$

$$= .25 (.5) 2 \sin 90$$

$$= .25 V$$

$$= \text{if } R = .5 \Omega \text{ find } I = \frac{V}{R} = \frac{\mathcal{E}}{R} = \frac{.25}{.5} = .5 A$$

= Energy in 1s

old formulas

$$W = \Delta E$$
$$P = \frac{W}{t}$$

$$P = IV = .5 (.25) = .125 \text{ Watts}$$

$$.125 \text{ Watts} = \frac{W}{1s} \text{ so } W = \Delta E = .125 J$$

$$- \text{find } F_{app} = ? \quad v = \frac{d}{t} \quad d = vt = 2 \frac{m}{s} (1s) = 2m$$

$$W = F \cdot d$$

$$.125 J = F (2m)$$

$$F = \frac{.125 J}{2m} = .063 N$$