

$v_f = ?$

$m = 24 \text{ kg}$

$$W = Fd \cos \theta \leftarrow$$

$$= \text{Area under Curve}$$

$$= \Delta E$$

$$W = A_{\Delta} = \frac{bh}{2}$$

$$= \frac{200(320)}{2}$$

$$= 32 \text{ kJ}$$

$$= \Delta E$$

$$\Delta E = \frac{m(v_f - v_i)^2}{2} = \frac{24(v_f)^2}{2}$$

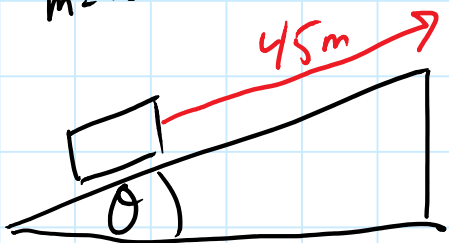
$$\pm \sqrt{\frac{32 \text{ kJ}}{12}} = v_f$$

$$51.6 \text{ m/s} =$$

$m = 1000 \text{ kg}$

$\theta = 3^\circ$

$\mu = 0$



$$d_x = 45 \cos(3) = 44.9 \text{ m}$$

$$d_y = 2.36 \text{ m}$$

$$W = \Delta E = mgh$$

$$= (1000)(9.8)(2.36) \\ = 23 \text{ kJ}$$

What if $\mu = .30$

$$F_f = \mu F_n \\ = .3(mg \cos \theta) \\ = .3(1000)(9.8) \cos(3) \\ = 2900 \text{ N}$$

$$W = 2900(44.9) \\ = 130 \text{ kJ}$$

$$W_{\text{net}} = W_1 + W_2 \\ = 23 \text{ kJ} + 130 \text{ kJ} \\ = 153 \text{ kJ}$$

- 1) I didn't know the booklet was important
- 2) Notes/ ~~yours~~ mine
- 3) Review notes