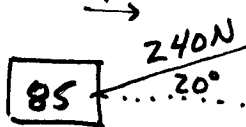


Chapt 6

6.10  $\mu = 0.200$
 $d = 8.0 \text{ m}$

a.) $F_x = 240 \cos 20^\circ$

$W_F = F_x = (240 \cos 20^\circ) 8.0 = \underline{1800 \text{ J}}$

b.) $f = \mu N$ $N = mg - 240 \sin 20$

$W_f = -\mu N x = (-\mu mg + \mu 240 \sin 20) 8.0 = \underline{-1200 \text{ J}}$

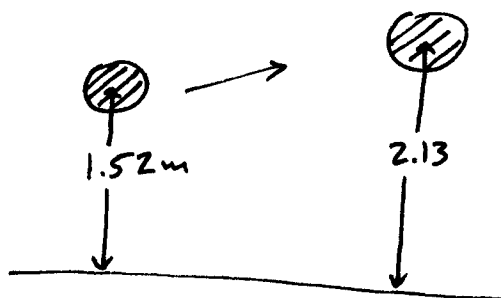
6.14

$m = 0.075 \text{ kg}$ $F = 65 \text{ N}$ $d = 0.9 \text{ m}$ $v?$

$W = Fx = \frac{1}{2} mv^2 \rightarrow v = \sqrt{\frac{2Fx}{m}}$

$\sqrt{\frac{2 \cdot 65 \cdot (0.9)}{0.075}} = v = \underline{39.5 \text{ m/s}}$

6.30



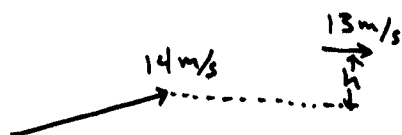
$mg = 71.7 \text{ N}$

a.) $W_g = Fx = (71.7) (-2.13 + 1.52)$ ball was raised
 $= \underline{-43.7 \text{ J}}$

b.) $mgh = PE$

$mg(h_f - h_i) = (71.7)(2.13 - 1.52) = \underline{43.7 \text{ J}}$

6.36



$\frac{1}{2} mv_i^2 + \frac{1}{2} mg h_i = \frac{1}{2} mv_f^2 + mgh_f$

$\frac{1}{2} mv_i^2 = \frac{1}{2} mv_f^2 + mgh$ $h = \frac{\frac{1}{2}(v_i^2 - v_f^2)}{g}$

$h = \frac{1}{2(9.8)} (14^2 - 13^2) = \underline{1.38 \text{ m}}$