

(29) (cont'd)



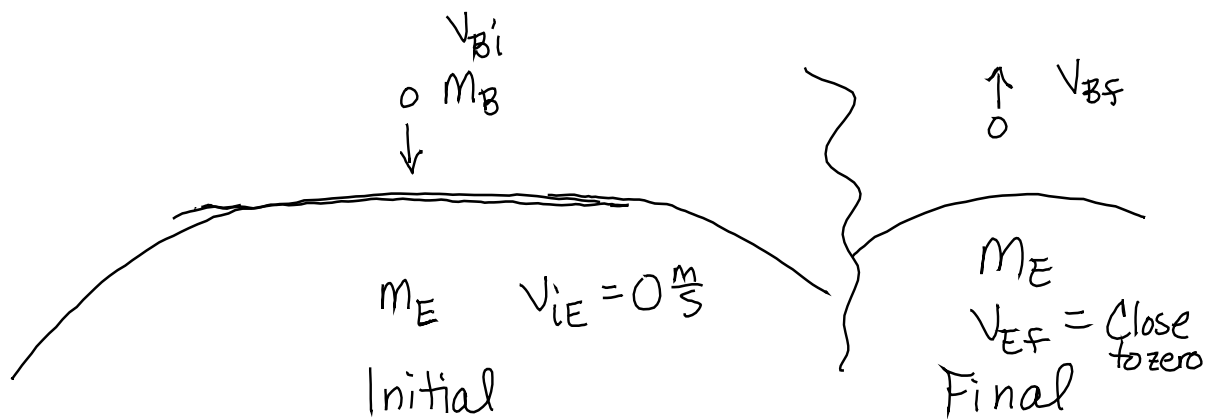
1 = snowball $m_1 = 0.15 \text{ kg}$
2 = skater $m_2 = 60 \text{ kg}$

$$\frac{m_1 v_{1i} + m_2 v_{2i}}{(m_1 + m_2)} = \frac{(m_1 + m_2) v_f}{(m_1 + m_2)}$$

$$v_f = \frac{m_1 v_{1i} + m_2 v_{2i}}{(m_1 + m_2)} = \frac{0.15 \text{ kg} (32 \frac{\text{m}}{\text{s}}) + (60 \text{ kg}) (0 \frac{\text{m}}{\text{s}})}{(0.15 \text{ kg} + 60 \text{ kg})}$$

$$v_f = 0.080 \frac{\text{m}}{\text{s}}, \text{ forward}$$

(24)



$$m_B v_{Bi} + m_E (0) = m_B v_{Bf} + m_E v_{Ef}$$

$$v_{Bi} = v_{Bf}$$