

Ex 5.3, 5.4, 30, 31

Ex 5.3 p124 $m = 60 \text{ kg}$

$10 \text{ m} = h$ (A)

reference 0 m



$$W = \overset{f-i}{\Delta E}$$

$$E_f - E_i = \Delta E$$
$$KE_f + PE_f = KE_i + PE_i$$

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

$$PE = mgh$$

$$PE_A = mgh_A = 60(9.8)(10) = 5880 \text{ J}$$

$$PE_B = mgh_B^{\uparrow 0} = 0 \text{ J}$$

$$\Delta PE = PE_f - PE_i = 0 - 5880 \text{ J} = \overset{\text{lost}}{\ominus} 5880 \text{ J}$$