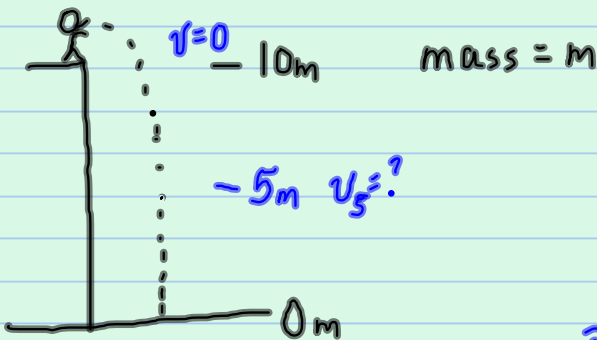


Ex 5.4 p128



A)  $\frac{1}{2} m v_i^2 + mgh_i = \frac{1}{2} m v_f^2 + mgh_f$  ←

~~$m(9.8)(10) = \frac{1}{2} m v_f^2 + m(9.8)(5)$~~

$98 = \frac{1}{2} v_f^2 + 49$

$\sqrt{\frac{98 - 49}{\frac{1}{2}}} = \sqrt{v_f^2}$

$9.9 \frac{m}{s} = v_f$

B)  $\frac{1}{2} m v_i^2 + mgh_i = \frac{1}{2} m v_f^2 + mgh_f$

$9.8(10) = \frac{1}{2} v_f^2$

$\frac{98}{\frac{1}{2}} = v_f^2$

$14 \frac{m}{s} = v_f$

E is conserved

not created or destroyed, just changes form.

$E_i = E_f$

$\frac{49}{\frac{1}{2}} = 49 \cdot \frac{2}{1} = 98$

$mgh$

$W_g = \Delta PE$

from A → C

$PE_C - PE_A$