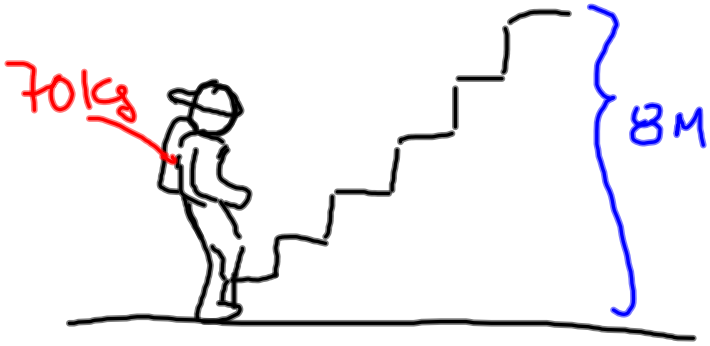
$$\text{Work} = (F)(\Delta d) = (70)(9.81)(8\text{ M}) = 5493.6\text{ J}$$

$$(\text{N})(\text{M}) \qquad (\text{kg})(\text{M/s}^2)$$

$\uparrow = W = mg$



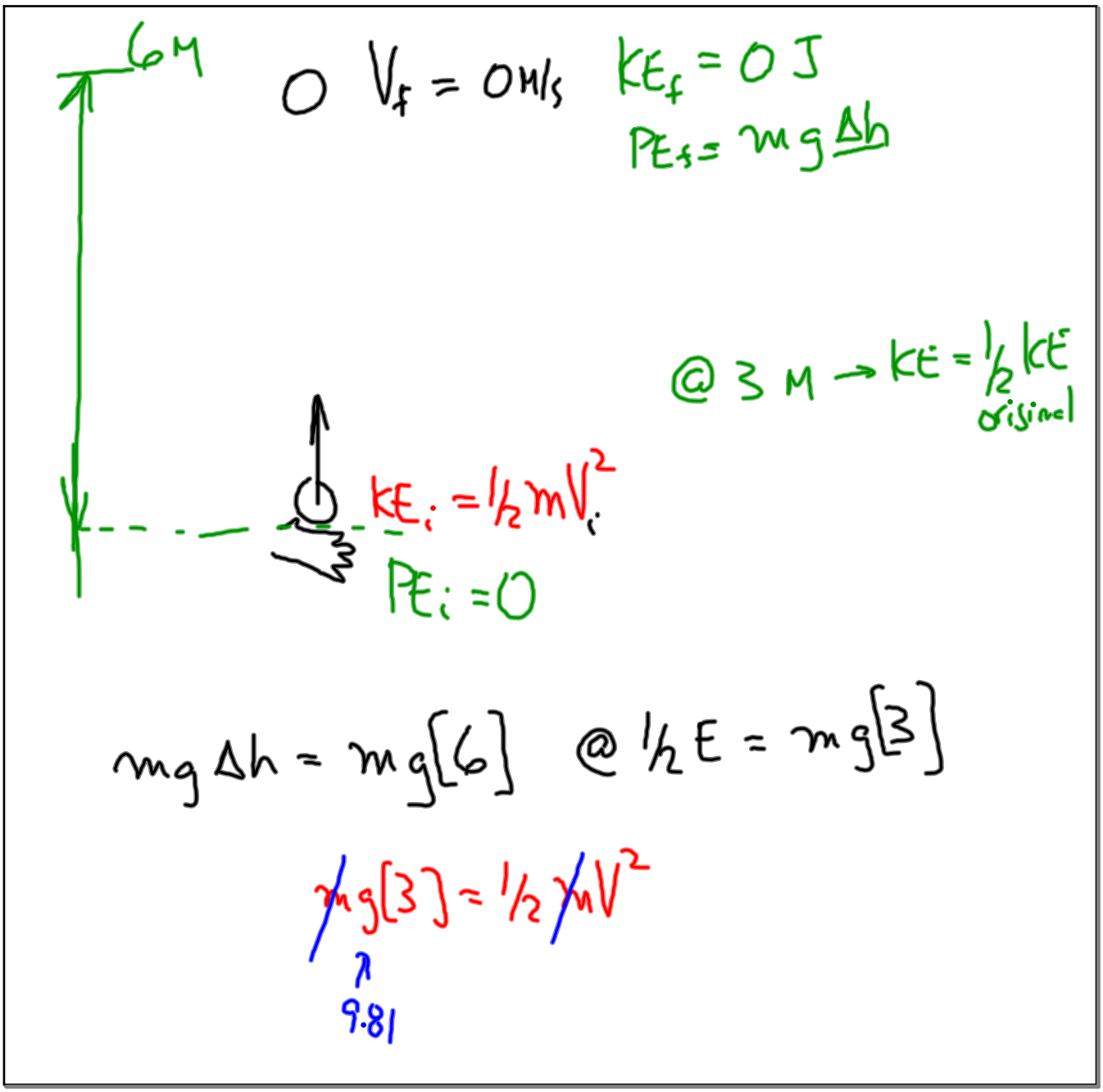
$$\text{Power} = \frac{\text{Work}}{\Delta t}$$

$\Delta t = 5\text{ s}$

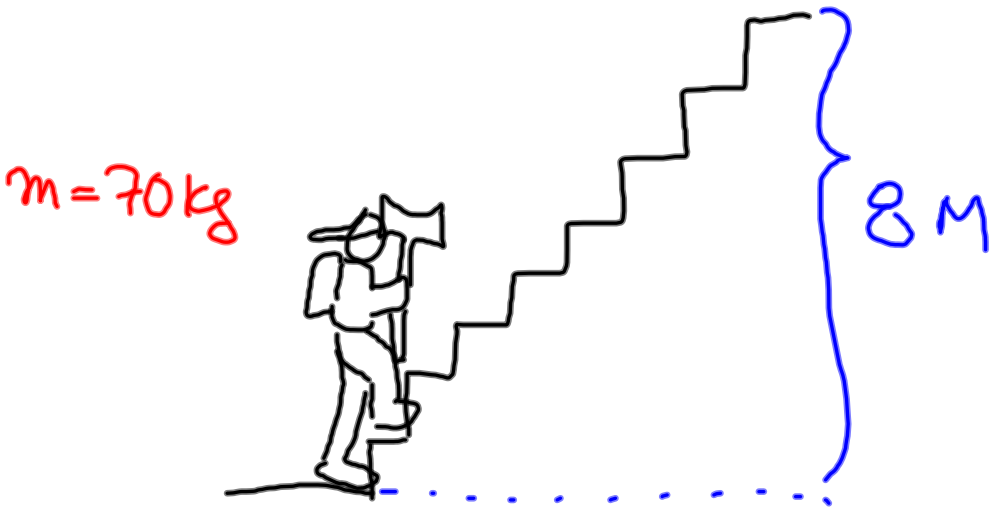
$$\text{Power} = \frac{5493.6\text{ J}}{5\text{ s}}$$

$$\text{Power} = 1{,}098.72\ \frac{\text{J}}{\text{s}}$$

1,098.72 watts


6 M
$V_f = 0$ m/s
$KE_f = 0$ J
$PE_f = mg\Delta h$
@ 3 M → KE = ½ KE original
$KE_i = \frac{1}{2}mV_i^2$
$PE_i = 0$
$mg\Delta h = mg[6]$
@ ½ E = $mg[3]$
$mg[3] = \frac{1}{2}mV^2$
9.81

$$\text{Weight} = mg = (70)(9.81) = 686.7\ \text{N}$$



$$\text{Work} = F_{\parallel}\,\Delta d = (686.7\ \text{N})(8\ \text{M}) = 5493.6\ (\text{N})(\text{M})$$

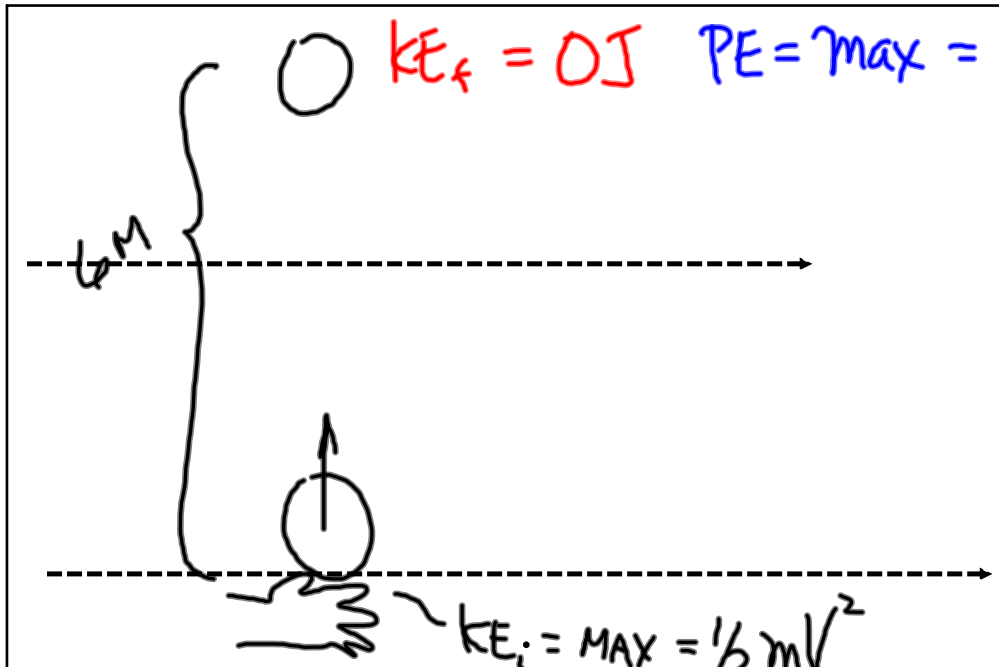
$(\text{N})(\text{M}) = \text{J}$

$F_{\parallel}$ = WEIGHT $= mg$

$\Delta t = 5\text{S}$

$$\text{Power} = \frac{\text{Work}}{\Delta t} = \frac{5493.6\ \text{JOULES}}{5\text{S}} = 1098.6\ \text{WATTS}$$

$$\left[\frac{746\ \text{WATTS}}{\text{HP}}\right]$$



$PE_i = mg\Delta h = 0\ J$

$$\left(\frac{1}{2}mV^2\right) = mg(3)$$

$$V = \sqrt{2(9.81)(3)} = 7.67\ m/s$$

$=$