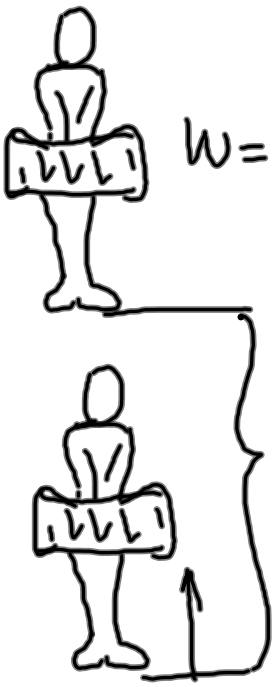


$W = 500N = mg$

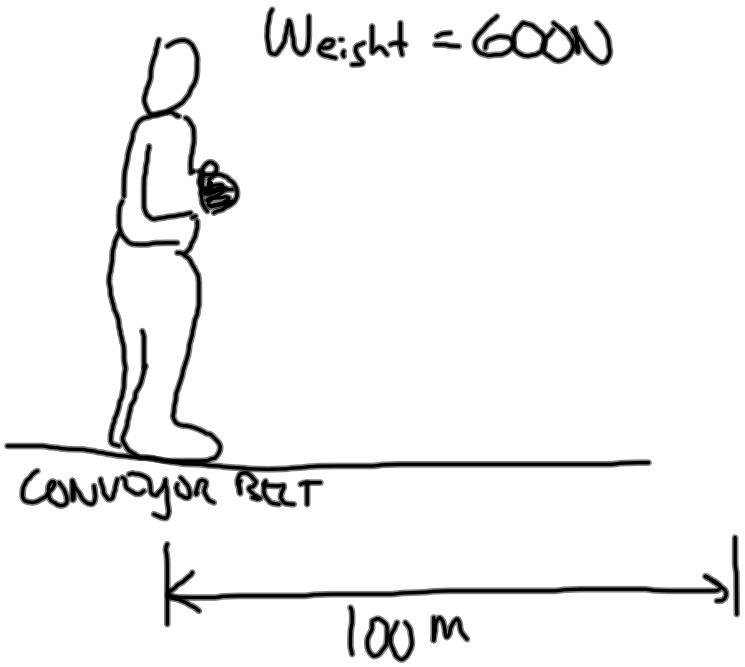
$m = 50.968\ kg$

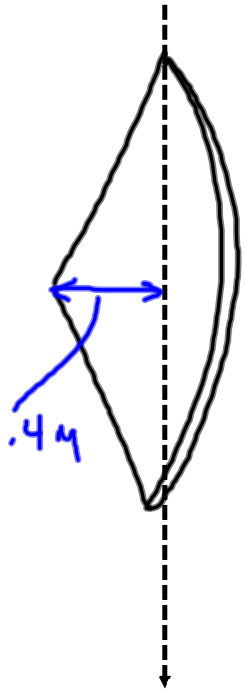
Δh

$Work = F\,\Delta h$

$250J = (500N)\Delta h$

$\Delta h = 0.500m$


Weight = 600N
CONVEYOR BELT
100 m



Force applied

$0 \rightarrow 270\,N$

$F_{ave} = 135\,N$

$W_{on} = (F_{ave})(\Delta d)$

$= (135\,N)(.4\,M)$

$54\,J$

$PE = 54\,J = \frac{1}{2} m V^2$

$.34\,kg$

$V = 17.8\,M/S$

$54 = \frac{1}{2}(.34)V^2$

$\sqrt{\frac{108}{.34}} = \sqrt{\frac{.34}{.34}V^2}$

$$\text{EFFICIENCY} = \frac{W_{OUT}}{W_{IN}}(100)\%$$

$$= \frac{E_{OUT}}{E_{IN}}(100)\%$$

NO. 13

$$\text{EFFICIENCY} = \left[\frac{W_{ORK}}{W_{IN}}\right] 100\%$$

$$\left(\frac{34}{48}\right) 100\% = 70.8\%$$

(A) MACHINE (B) MACHINE

$P = \frac{285\,J}{40\,s} = 7.125\,W$ $\frac{433\,J}{120\,s} = 3.60\,W$

$$P = \frac{W}{\Delta t}$$

LOAD

$$3P = \frac{3[W]}{\Delta t} = 3\frac{(F)(\Delta d)}{\Delta t}$$

$$\frac{3(F)(\Delta d)}{\Delta t} = \frac{(F)(\Delta d)}{\frac{1}{3}\Delta t} = \frac{(F)(\Delta d)}{\frac{1}{3}\Delta t}$$

$$EFF = \frac{W_{OUT}}{W_{IN}} 100\%$$

$$(.93) = \frac{93}{100} = \frac{W_{OUT}}{72\,J}\frac{(100)}{100}$$

$$\frac{W_{OUT}}{72} = .93$$

$$W_{OUT} = 67\,J$$

$$W_{OUT} = 67\,J$$