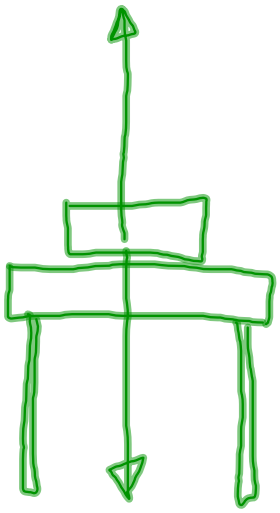


$$w = mg$$

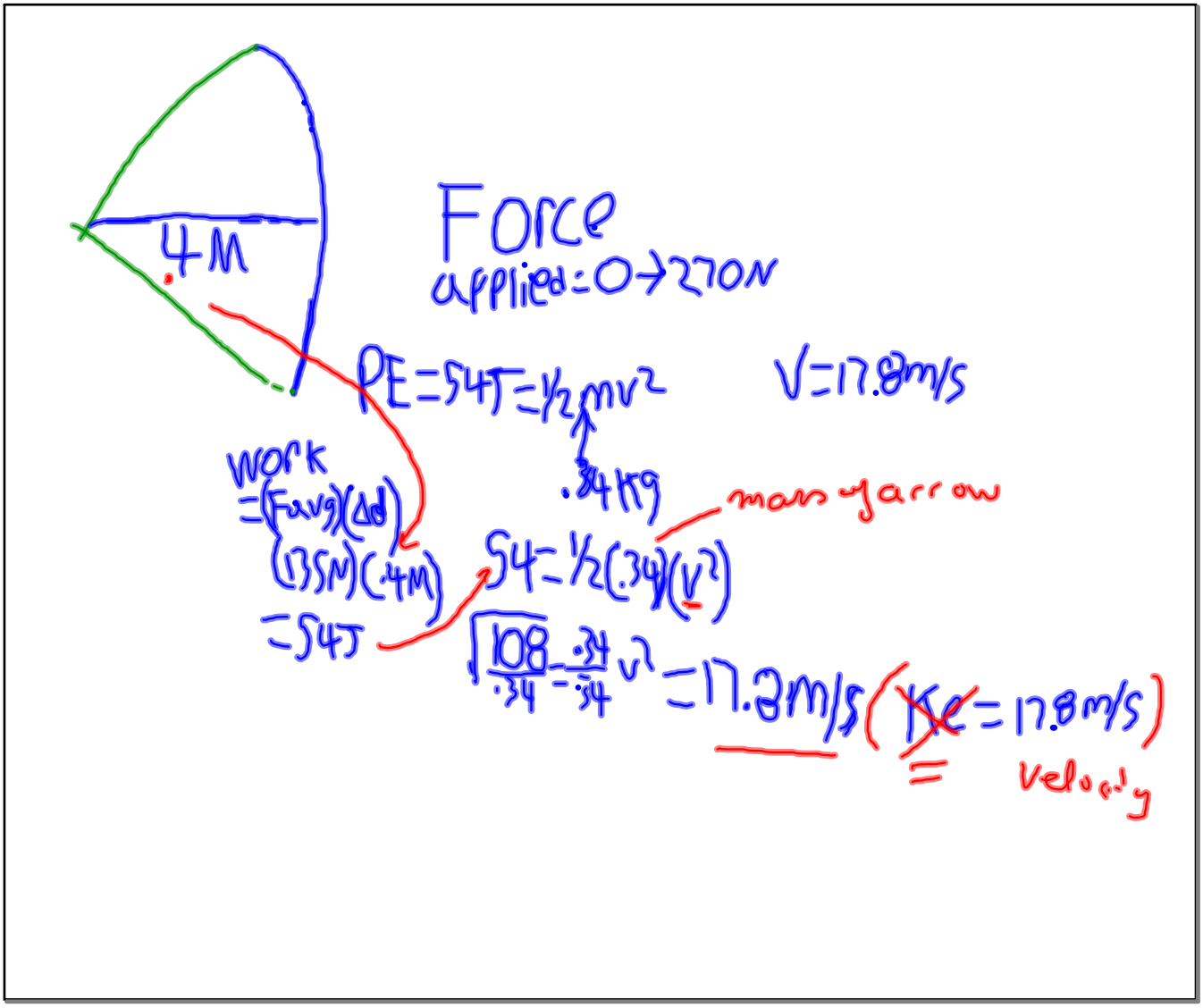
$$(3.6N) = (m)(9.81 m/sec^2)$$

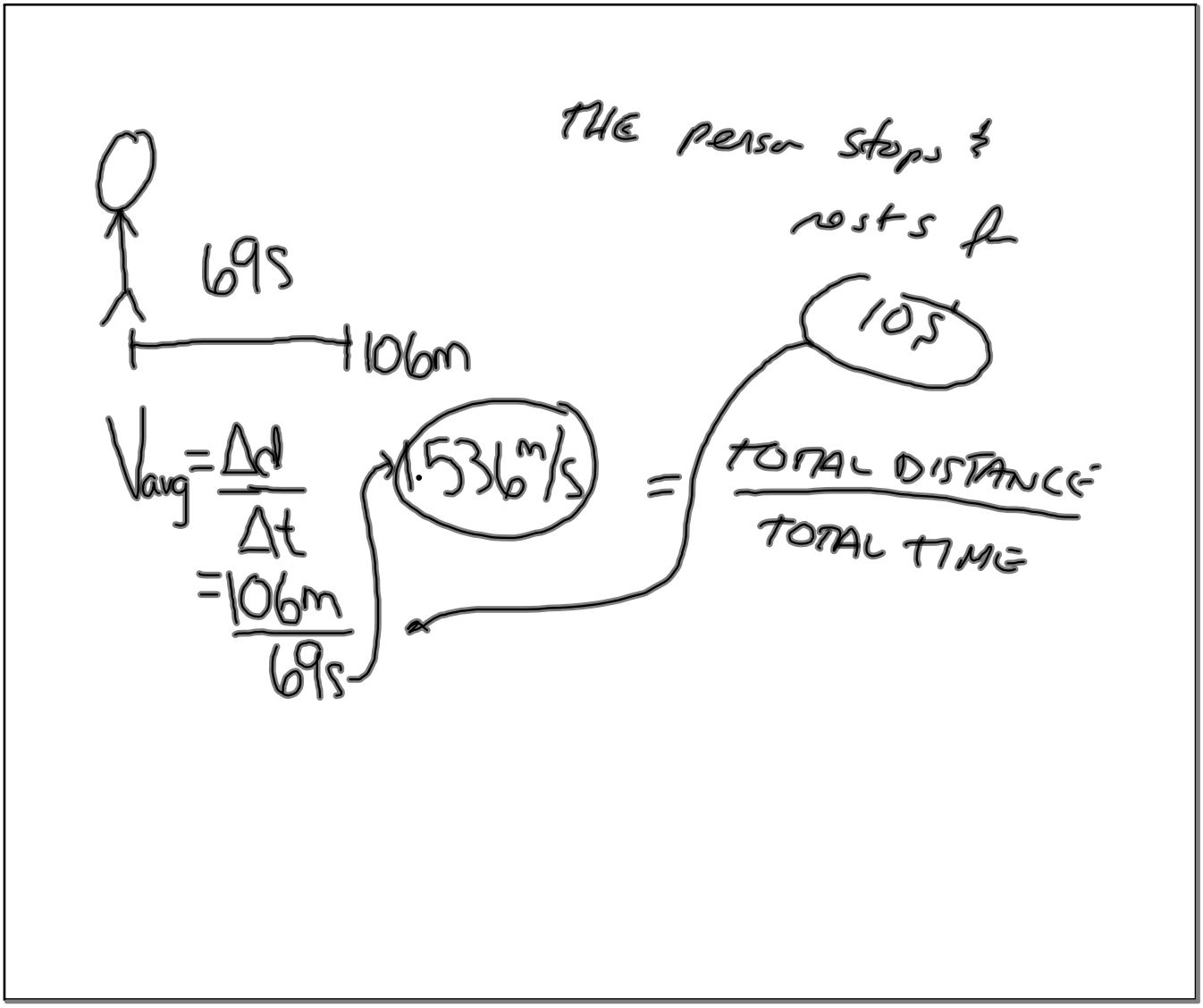
$$m = 0.367 Kg$$

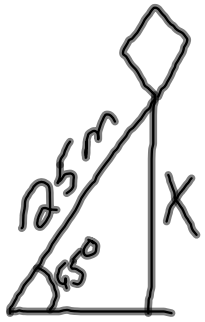
$$W = F_{\parallel} \Delta d$$

$$44\,J = (15\,N)\,\Delta d$$

$$\frac{44}{15} = 2.93 \text{ Meters}$$


.4M
Force
applied = 0 → 270N
PE = 54J = ½mv²
V = 17.8m/s
.34kg
mass yarrow
work
= (Favg)(Δd)
(135N)(.4M)
= 54J
54 = ½(.34)(v²)
√(108/.34 = 324/34 v²)
= 17.8m/s
(KE = 17.8m/s)
=
Velocity


THE person stops & rests for
10s
69s
106m
$v_{avg} = \frac{\Delta d}{\Delta t}$
$= \frac{106m}{69s}$
1.536 m/s
=
TOTAL DISTANCE
TOTAL TIME



SOH → $\sin(65) = \frac{X}{25} = [0.9063 = \frac{X}{25}]$

$X = 22.65m$

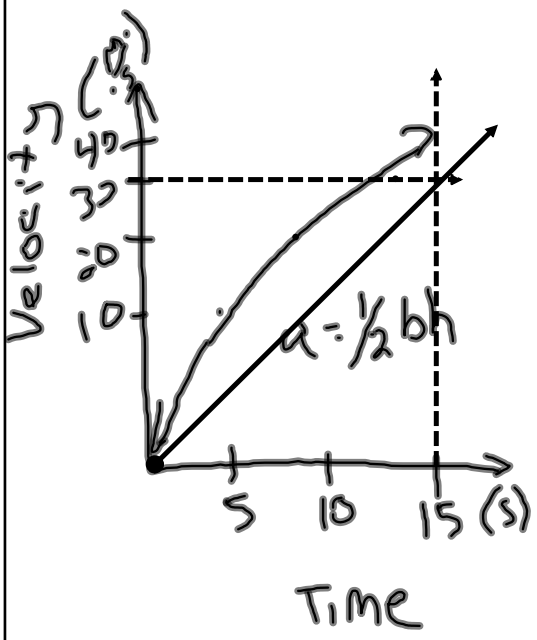
$F = m(a)$

$937\ kg$

$F = 937(9.81)$

$\underset{\downarrow}{w} = mg$

$9191.97 N$



$a = \frac{1}{2}(15)(30)$

$= \frac{1}{2}(450)$

$= 225\text{m}$

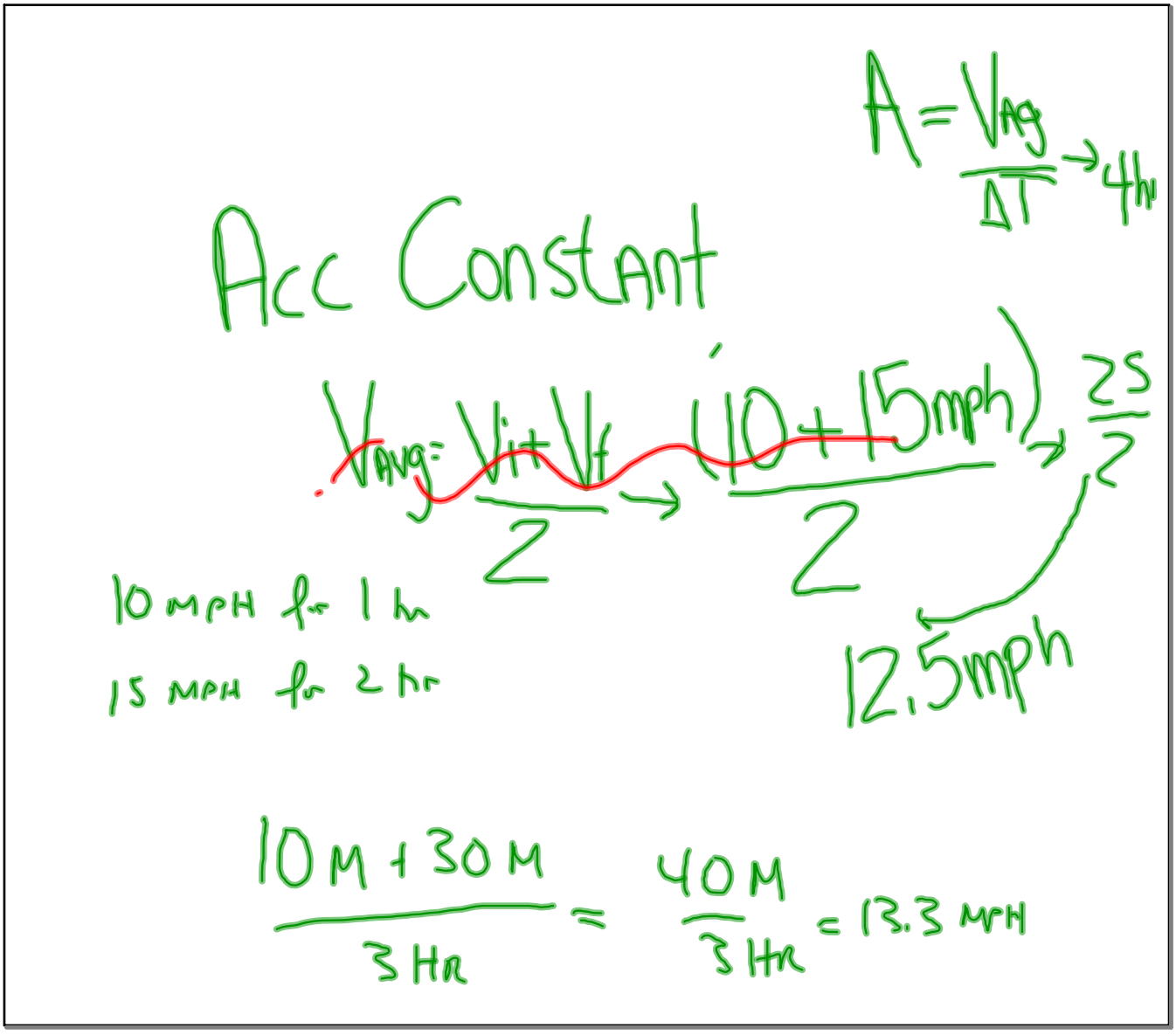
V_{Av_g}

15

$d = vt \quad d = (30)(15)$

$= 450\text{m}$

225m


A = Vavg / ΔT → 4hr
Acc Constant
Vavg = Vi + Vf / 2 → (10 + 15mph) / 2 → 25/2
10 MPH for 1 hr
15 MPH for 2 hr
12.5mph
10M + 30M / 3Hr = 40M / 3Hr = 13.3 MPH

a machine is 66% efficient
360 Joules are put in

$$\eta \rightarrow e = \frac{W_{out}}{W_{in}} 100\%$$

$$\frac{66\%}{100\%} = \frac{W_{out}}{360\,J}$$

$$.66 = \frac{W_{out}}{360\,J}$$

$$\text{weight Force} = (m)(g)$$
$$= (74\,\text{Kg})(9.8\,\text{m/s}^2)$$
$$= 725.94\,\text{N}$$