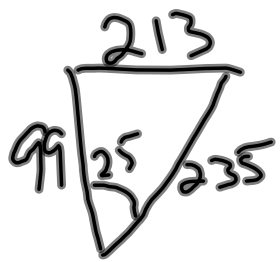
b) $0N\hat{i} + -150N\hat{j}$

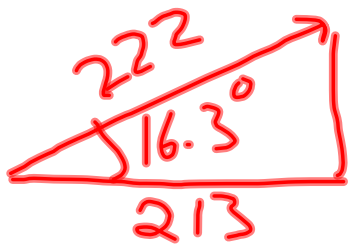
c) $114N\hat{i} + 0N\hat{j}$

d) $99N\hat{i} + 213\hat{j}$



e) $213N\hat{i} + 63N\hat{j}$

f)



222N @ 16.3° NofE

2)

$V_x = \frac{4.5}{3} = 1.5\ m/s$

$V_y = 0$

$12m = 0 + \frac{1}{2}(9.81)(t^2)$

$t = 1.56\ sec$

$\Delta x = 1.5\ m/s\,(1.56\ sec) = 2.34m$

a) $V_f = 0 + 1200(.035)$

$V_f = 42 \text{ m/s}$

$a = 1200 \text{ m/s}^2$

$t = 0.035 \text{ sec}$

$\theta = 32^\circ$

b) 

$\sin(32) = \frac{y}{42}$

c) $\cos(32) = \frac{x}{42}$

d) 20m

e) $20m = 22.3(t) + \frac{1}{2}(9.81)t^2$

$t = 5.3 \text{ sec}$

f) $\Delta x = 35.6(5.3)$

188m