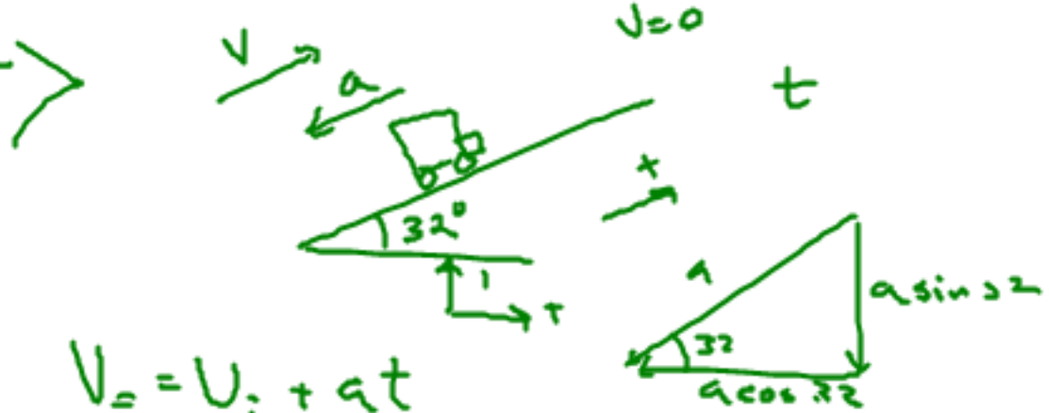
5)



$V_f = V_i + at$

$0 = V + a(\ \ )$

$V = -$

6)

a) $d = d_0 + V_i t + \frac{1}{2}at^2$

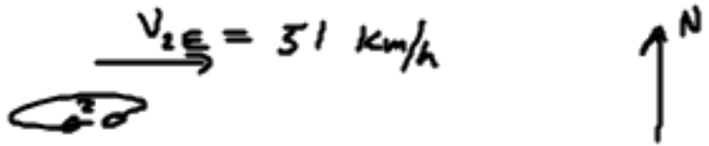
$8.1 = (8.8)t \quad t =$

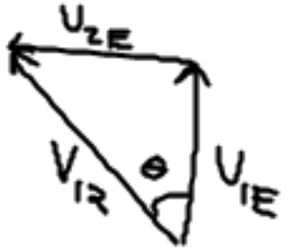
b) $t_b = t/2$

$d = d_0 + V_i t + \frac{1}{2}at^2$

$0 = d_0 + \frac{1}{2}(-9.8)\left(\frac{t}{2}\right)^2$

4)





$$V_{12} = \sqrt{V_{2E}^2 + V_{1E}^2}$$

$$\text{Tan}\,\theta = \frac{V_{2E}}{V_{1E}}$$

V_{12} @ θ W of N

8)

V/ $d = d_0 + v_i t + \frac{1}{2} a t^2$ H/ $d = d_0 + v t + \frac{1}{2} a t^2$

$-5 = 0 + (V_0 \sin\theta)(1.5) + \frac{1}{2}(-9.8)(1.5)^2$

$V_0 \sin\theta = 4.01667$

$$V_0 = \sqrt{(4.01667)^2 + (1.46667)^2}$$

$$\text{Tan}\,\theta = \frac{4.01667}{1.46667}$$

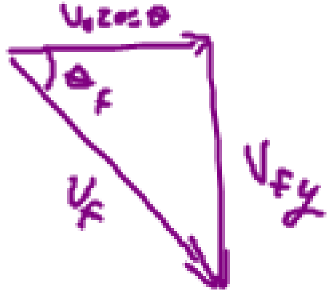
*

$$V_f^2 = V_i^2 + 2ad$$

$$0^2 = (4.01667)^2 + 2(-9.8)(d)$$

$$d = .823$$

$$d + 5 = 5.82 \text{ m}$$



$$V_f^2 = V_i^2 + 2ad$$

$V_{fy}^2 = (4.01667)^2 + 2(-9.8)(-5.$[redacted]$\text{m})$