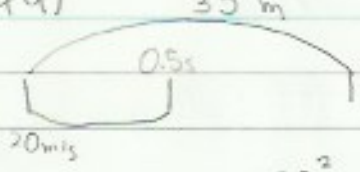
49) 35 m



a) 5m

b) ≈ 22 m/s

$v \cdot 0.5 + \frac{v^2}{2(-10)} = 35$

$\frac{10v}{20} + \frac{v^2}{20} = 35$

$10v + v^2 = 700$

$\Delta x = \frac{-20^2}{2(-10)}$

$\Delta x = \frac{120^2}{20}$ $\Delta x = 20 + 10 = 30$

$v^2 + 10v - 700 = 0$

$v \approx -32, 22$

50)

$\Delta x = v_0 t + \frac{1}{2} a t^2$

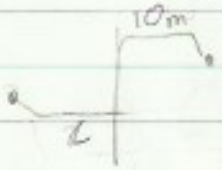
$-v^2 = 2a \cdot 10$

$a = -\frac{v^2}{20}$

$0 = v - \frac{v^2}{20}$

$0 = 20v - v^2$

$-20v = -v^2$

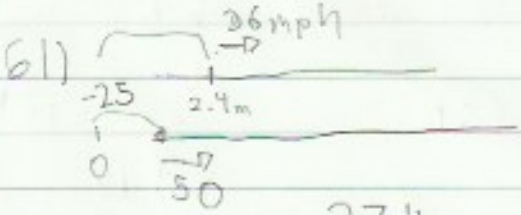


$D = vt + \frac{1}{2} 0 \cdot t^2$ $t = \frac{20}{v}$

$D = v \cdot \frac{20}{v}$

$D = 20$ m

61)



$\frac{27.4}{14} = 1.96$ hrs

$36 \cdot 1.96 + 2.4 =$

a) 1.96 hrs

b) 72.96 miles

c)