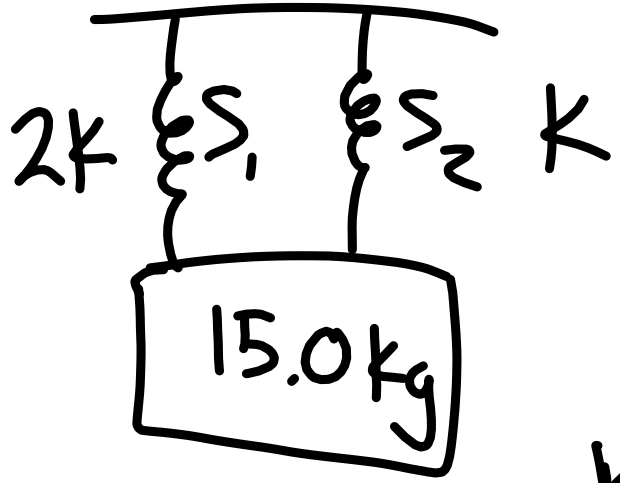
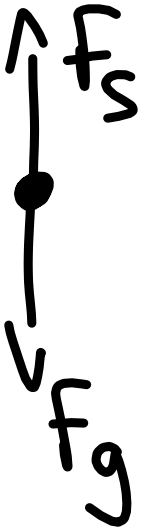
6



$x_1 = x_2 = 1.5_{cm}$

0.015_m



$K_{eq} = k_1 + k_2 \ldots$

$\Sigma \vec{F}_y = F_s - F_g = 0$

$$\Sigma F_y = F_s - F_g = 0$$

$x_1 = x_2$

$k_1x_1 + k_2x_2$

$k_1x + k_2x$

$x(k_1 + k_2)$

$kx - mg = 0$

$kx = mg$

$3kx = mg$

$$k = \frac{mg}{x3}$$

$$k = \frac{(9.81)(15)}{(0.05)3}$$

$m = 45.00\ kg$

$\theta = 45.00000^{\circ}$

$t \leq 1.000\ min \rightarrow 60.00\ s$

$l = 4.050\ m$

$g = 9.81 \frac{m}{s^2}$

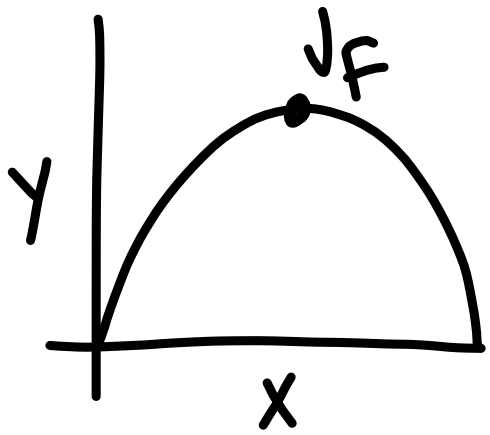
$d = 3906.05\ m$

a) $d_x = v_{ix} t + \frac{1}{2} a_x t^2$ ($a_x = 0$)

$d_x = v_{ix} t$

$\frac{d_x}{t} = v_{ix} = 65.10 \frac{m}{s}$

$$V_{Fy}^{0} = V_{iy} + a_y t$$

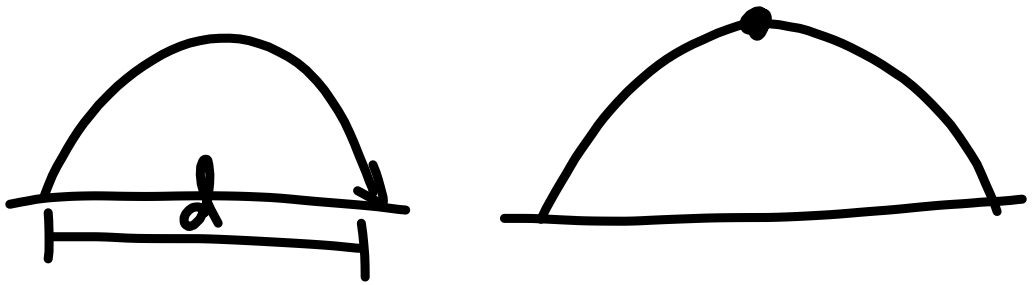


$$0 = V_{iy} + a_y t$$

$$\frac{-2V_{iy}}{a_y} = t = 6.636\,s \times 13.2 - s$$

X

Y



$2v_{iy} \times v_{ix}$

$2v_{ic} \times v_{ic} = 2v_{ic}^2$

$v_f^{\nearrow 0} = v_i + at$

$0 = v_i + at$

$-v_i = at$

$v_f^{\,0} = v_i + at$ (y)

$\frac{-2v_i}{a_y} = t$

$d = v_i t + \frac{1}{2}at^2$ (x)

$d = v_i t$

$\frac{d_x}{v_i} = t$

$v_f^{\,2 \to 0} = v_i^2 + 2ad$

$\frac{-v_i^2}{2a} = d = 976\ m$