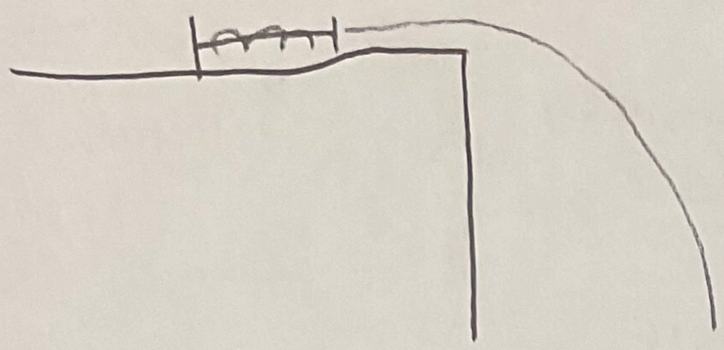
Question 9:

Jack Spears

$\frac{1}{2}kx^2 = \frac{1}{2}mv^2$



$\frac{1}{2}kx^2 = \frac{1}{2}mv_i^2$

$\frac{1}{2} \cdot 1.1 \cdot a = \frac{1}{2}v_i^2$

$\sqrt{1.1 \cdot a} = v_i$

$\Delta x = x_f - 0$

$1.93 = \sqrt{1.1a}$

$x_f = 2.2m - 0.27m$

$x_f = 1.93$

$F = -kx$

$-1.1kx = m \cdot a$

$\frac{m \cdot a}{1.1} = k$

$v_i = ?$

$v_f = ?$

9.

$v_i = 0$

$v_f = R$

$a = -9.8$

$t_i = t_f$

Answer 1.23cm