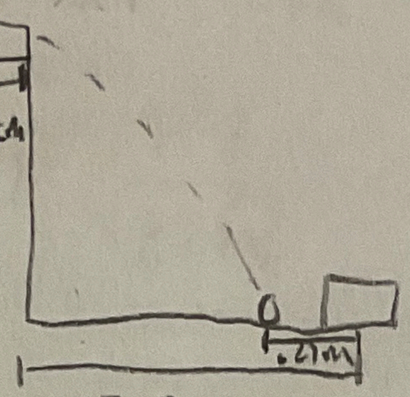
Jul

9.



$F = -kx$

$v_f = v_i + at$

$v_f^2 - v_i^2 = 2a\Delta x$

$\Delta x = v_i t + \frac{1}{2}at^2$

$\Delta x = v_f t + \frac{1}{2}at^2$

$\Delta x = \frac{1}{2}(v_i + v_f)t$

$$\frac{m v_i^2 = 3m v_f^2}{3m}$$

$\frac{1}{3}v_i^2 = v_f^2$