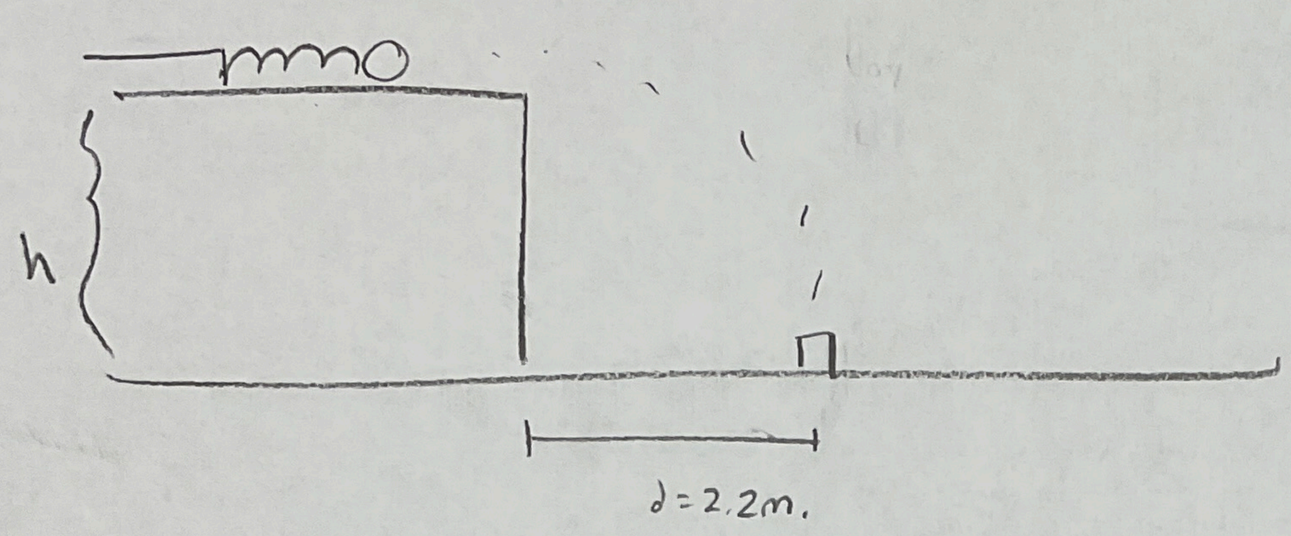
Zachary Britting Britting. 6

Q 9



B: 0.011 m. compress = 0.27m short

Distance Rhonda to compress spring?

$\Delta x = ?$

$F = K\Delta x$

$K = ?$

$F = ?$

$U_E = KE$

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

$\frac{1}{2}K(0.011)^2 = \frac{1}{2}(m)v^2$

$\sqrt{\frac{K(0.011)^2}{m}} = v$

$\frac{1}{2}K(0.011)^2 + m(9.8)h = \frac{1}{2}mv^2$

$\frac{1}{2}K(0.11)^2 + mC$

B:

$\Delta x = 0.011$

$d = 1.93$

$K = ?$

E_0

$U_E + U_0 = KE$

$\frac{1}{2}Kx^2 + mgh = \frac{1}{2}mv^2$

$V_{oy} = 0$

$V_{Fy} = ?$

$a = 10 m/s^2$

$t = ?$

$\Delta y = ?$

$V_{ox} = ?$

$\Delta x = 1.93$

$t = ?$

$a = 0$

$\Delta x = V_{ox} t$

$1.93 = V_{ox} t$

$V_f - V_0 = at$

$\Delta y = 0 + \frac{1}{2}at^2$

$\Delta y = \frac{1}{2}(10)t^2$

$\sqrt{\frac{n}{5}} = t$

$V_{oy} = 0$

V_0

mg