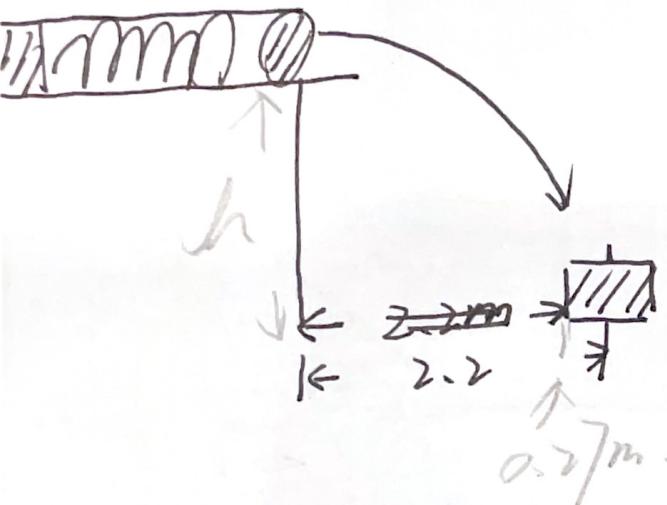


Q9:

How far should compress? ( $g=10 \text{ m/s}^2$ )  
 A

$$\Delta x = 0.011 \text{ m}$$

$$\Delta x = (2.2 - 0.27) = 1.93 \text{ m}$$



$$\Delta x = \Delta k t$$

$$\downarrow V(t) = -W_0 \cdot A \cdot \sin(\omega_0 t + \varphi)$$

$$(mgh + \frac{1}{2}k\Delta x^2) (\frac{1}{2}mv_f^2)$$

$$V_f^2 = \frac{2mgh + k\Delta x^2}{m}$$

$$\downarrow W_0 = \sqrt{\frac{k}{m}}$$

$$k = W_0^2 \cdot m$$

$$t = \frac{1.93}{V_f}$$

$$h = \frac{1}{2}gt^2 = \frac{1}{2}g \left( \frac{1.93}{V_f} \right)^2$$

$$V_f^2 = \frac{\frac{mg^2(\Delta x)^2}{V_f^2} + k\Delta x^2}{m}$$

$$U_{\max} = Aw$$

$$A = \frac{U_{\max}}{w} =$$