

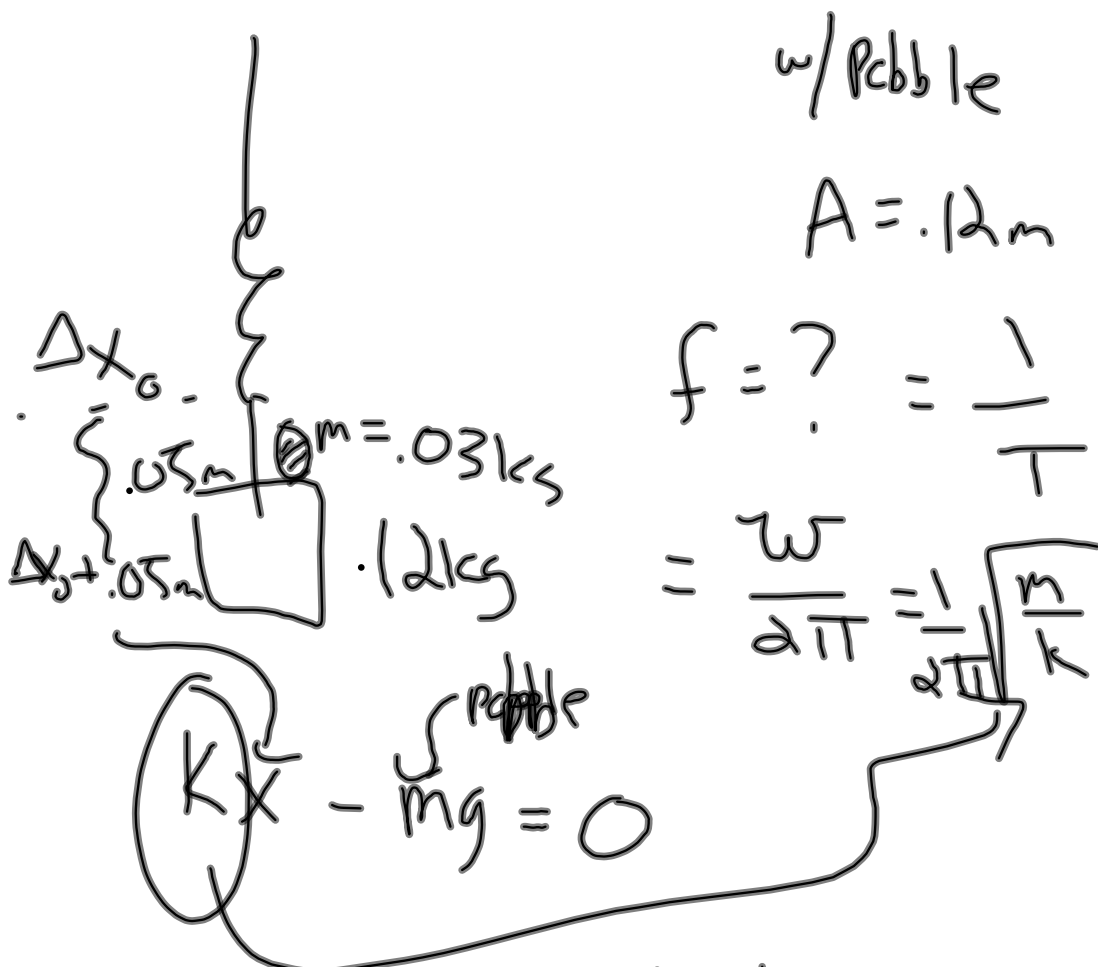
$$E_{\text{total}} = \frac{1}{2}kx^2 - mgh$$

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

$$\frac{k}{m} = \frac{2gh}{x^2}$$

$$\omega = \sqrt{\frac{k}{m}}$$

$$\omega = \sqrt{\frac{2g}{\Delta x}}$$



b)  $= \frac{1}{2} T \quad \frac{1}{2} \frac{1}{f}$

c) Max disp.  $F_{\text{net}} = ma_{\text{max}}$   
 $= m A \omega^2$