In equilibrium, |Fs| = |Fg|

$$\Rightarrow mg = ks$$

$$\Rightarrow k = mg | F_3|$$

$$\stackrel{\cdot}{\longrightarrow} \frac{1}{5}$$

, slope of best fit line = k

$$T = 2\pi \sqrt{\frac{m}{k}}$$

$$\Rightarrow k = m(2T)$$