

## Prelab Questions

These questions need to be completed before entering the lab. Please show all workings.

**Marker's  
Initials**

### Prelab 1

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

Square both sides of the equation above. If we plot  $T^2$  vs.  $m$ , what is the expression for the slope of this graph?

### Prelab 2

An unstretched vertical spring has length of  $L_1 = 7.35 \pm 0.05 \text{ cm}$ . A  $500.0 \pm 0.1 \text{ g}$  mass is hung on the spring which then stretches it to a length  $L_2 = 12.50 \pm 0.05 \text{ cm}$ . Calculate the spring constant  $k$  and its uncertainty. Show your workings.