

$$T^2 = \left(\frac{4\pi^2}{g}\right)L$$

Simple pendulum ←

$$\text{slope} = \frac{4\pi^2}{g}$$

But the photogate timed $\left(\frac{T}{2}\right)$
not T

therefore for our lab

this is what's graphed on the
 T^2 vs L graph...

$$\left(\frac{T}{2}\right)^2 = [\text{slope}] \times L$$

$$\frac{T^2}{4} = \left[\frac{\left(\frac{4\pi^2}{g}\right)}{4}\right] \times L$$

so, the expected/accepted value for
the slope of your 3rd graph is:

$$\frac{\left(\frac{4\pi^2}{g}\right)}{4} = \underline{\hspace{2cm}} ?$$

Use this value when you
calculate % error (pg 9 #5)