

Harmonic Motion

Name _____ Date _____

Graph Results

Create a graph for the pendulum.

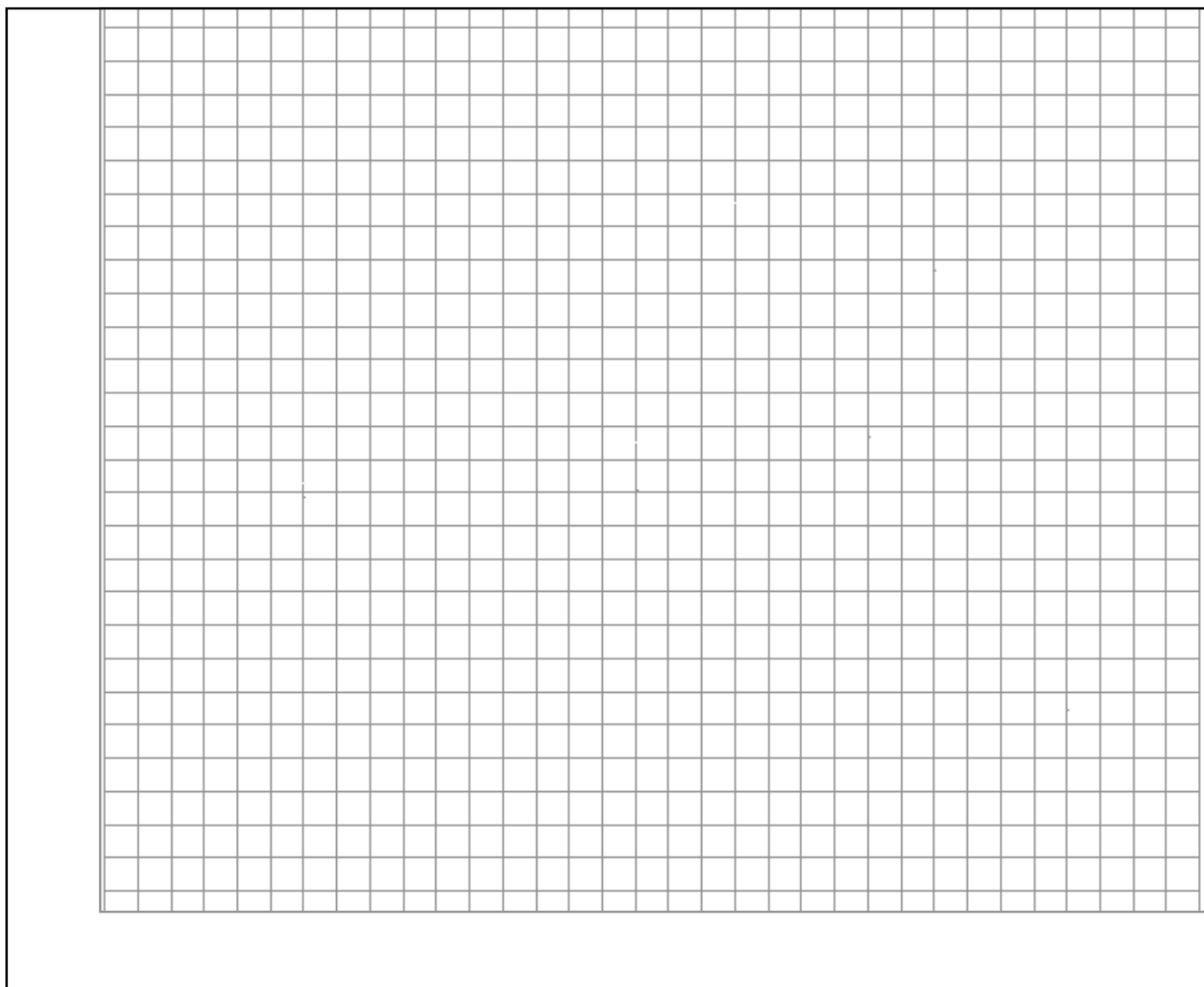
Plot: T^2 on the y axis plot L on the x axis.

Find the slope of a best fit line. _____

Fit the equation for the period of a pendulum to your graph.

What should the slope of the line be if we are correct that $g = 9.8 \text{ m/s}^2$?

$$T = 2\pi\sqrt{\frac{l}{g}}$$



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Activity 4: Pendulum Motion

#	Angle	Time (20)	T (period)
1	5 °		
2	15 °		
3	25 °		

What did you observe about changing the initial angle of the pendulum?

#	Mass	Time (20)	T (period)
1	40 g		
2	120 g		
3	200 g		

What did you observe about changing the mass of the pendulum?

#	Length (m)	Time for 20	T (period for each)
1			
2			
3			
4			
5			
6			
7			
8			