Lab Report

Name of the Experiment :

Your Name :

Your ID # :

Name of the Lab Partner :

Date :

Instructor's comments:

Data tables:

Table 1. Mass Dependence of the Period

Length of Pendulum, L = _____ m

Mass (grams)	A Single Period (sec)			T_{avg} (sec)	$T_{avg}2$ (sec^2)

Table 2. Angle Dependence of the Period

Mass of Pendulum =_____ grams

Angle (degrees)	A Single Period (sec)			T_{avg} (sec)	$T_{avg}2$ (sec^2)
10					
15					
20					
30					
40					

Table 3. Length Dependence of the Period

Length l (m)	A Single Period (sec)			T_{avg} (sec)	$T_{avg}2$ (sec^2)
0.40					
0.45					
0.50					
0.55					
0.60					

Slope of the best fit line = _____ s^2/m.

g_{exp} = _____ m/s^2.

Percent error = _____

Results:

Questions:

1. Does the period of a simple pendulum depend on the mass?

2. Is the period constant over small angles? Does it vary when one reaches larger angles?

3. Does the period depend on the length of the pendulum?

4. Of the three parameters explored in this experiment, which has the strongest influence?

5. Is your best-fit line in form Table-3 goes through the origin? Explain why or explain not?

Discussion: