Period of a Pendulum

How to work with the data

L in cm	**Period**	**Period^2**
0	**0**	**0**
5	**0.448799**	**0.20142**
10	**0.634697**	**0.40284**
20	**0.897597**	**0.805681**
30	**1.099327**	**1.208521**
40	**1.269394**	**1.611361**
50	**1.419226**	**2.014202**
60	**1.554684**	**2.417042**

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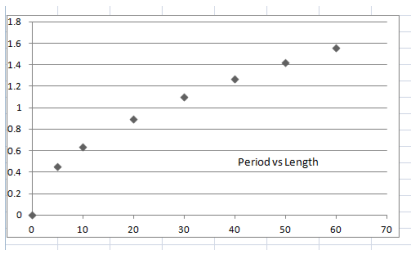
One way to look at the "shape" of the data would be to draw a graph.

Below you see Length (cm) along the x-axis and Period along the Y-axis



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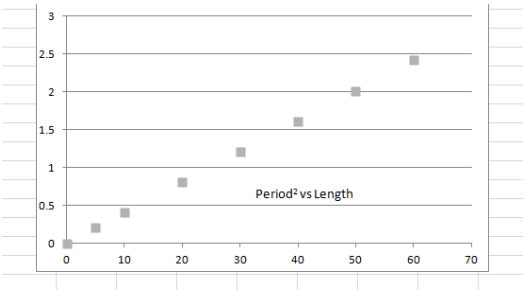
It should be obvious that the graph is a curve.
It is not easy to draw an accurate line when the line is a curve.

Let us see what it would look like if we graph Length vs. Period^2



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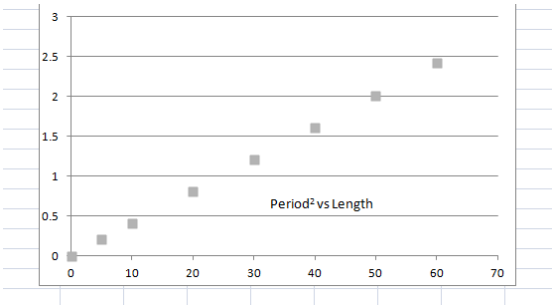
That is easier to work with.
Draw the best straight line



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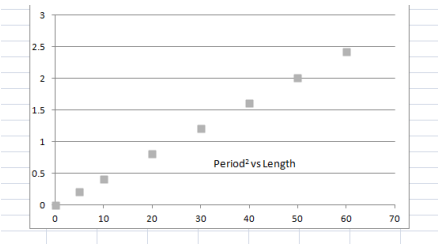
Now use the line to estimate the what length pendulum would have a period of 1 second.



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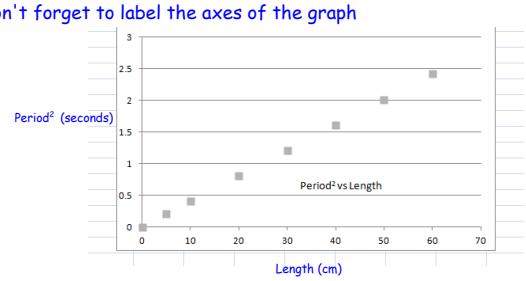
Don't forget to label the axes of the graph



This is what you will hand in:
Names of group members, Title of Experiment, Date performed
Data Table
Graph of Period^2 vs Length with estimation lines

Conclusion:
In order to have a period of 1 second, a pendulum should be _____ cm long.

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