Excel Assignment

1. In Excel enter the following data as shown:

Position(m)	Time(s)
2	0.0581429
10	0.4057143
13	0.3714286
15	0.4279714
19	0.5428571
26	0.7428571
34	0.9714286
49	1.4015
50	1.2285714
58	1.6571429
78	2.2285714
95	2.7142857
112	3.2
145	4.1414571
169	4.8285714
189	5.4
210	5.74
225	6.7285714
283	8.0877143
325	9.2857143

2. Plot the data on a scatter plot with the position data on the y-axis and the time on the x-axis. Make sure to include Axis titles (with units), graph title, and a trendline (with the equation on the graph).

How to make a scatter plot:

a. First highlight your two columns of data. The left column must be the x-axis values and the right column contains the y-axis values. **(You must make sure that you have the x-values in the left column and the y-values in the right column otherwise you will not be plotting the correct graph. Think about a linear graph what would happen to the slope?)**
b. At the top of the Excel Window, Click "Insert". The tab below the "Insert" will change.
c. Under the "Charts" section select "Scatter". A small window will drop down.
d. Click the image in the top left of the drop down box. The selection indicates you want a graph with only the individual data point plotted. The graph will now appear.
e. To add a graph and axis titles, Click on the graph and then Click on the "Layout" tab at the top of the Excel Window. The tab below will change again.

f. Under the labels section use the "Chart Title" and "Axis Title" buttons to add in the proper labels. **(Make sure to include units in the Axis Titles. Without units your graph is wrong!)**

How to add a trendline to your graph:

a. On your graph, right-click on a data point. All data points will be highlighted and a Window will pop-up.
b. Select the "Add Trendline" option. A new option Window will appear.
c. Under the "Trendline Options" tab, select the following: "Display Equation on Chart" and "Display R-squared value on chart".
d. Click "Close". The linear equation of your line will now appear on your graph.
e. You can move the equation anywhere on the graph by dragging it.

3. Use the "LINEST" instructions provided. There is a PDF step by step instructions and a youtube video link on CANVAS.
4. Copy and paste your graph into a MicrosoftWord File.
5. Copy your "LINEST" results into the Word File. Make sure to keep them in order. It should be a 2 column by 5 row result.
6. Answer the following questions **BELOW** the graph and LINEST results.
    a. What is the calculated slope of your graph.
    b. You are plotting a Position versus Time graph, physically what does the slope of a Position versus Time graph correspond to.
    c. Given that $v = \frac{Position}{time}$, if you had plotted time on the y-axis and position on the x-axis, what would the slope of your graph be? I want your answer in terms of v, not a number.