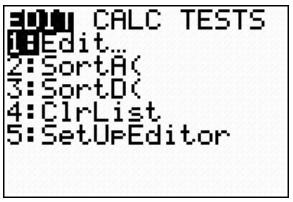
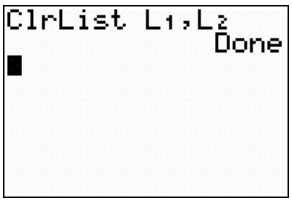
Entering and Graphing the Data

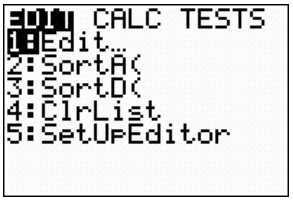
1. Turn the calculator on.
   Press [STAT] .



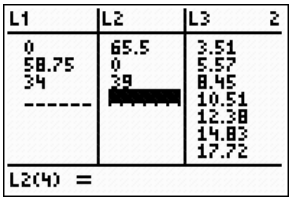
To clear list 1 and list 2, press [2nd] [1] [,] [2nd] [2] [ENTER].



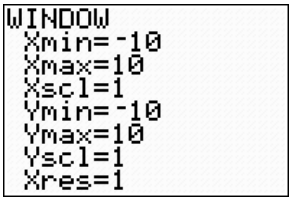
2. Press [STAT] [1]



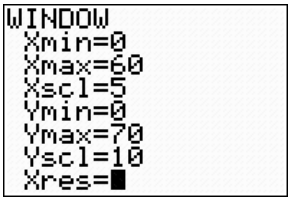
Press [0] [▼] [▶] [6] [5] [.] [5] [▼] [◀] [5] [8] [.] [7] [5] [▼] [▶] [0] [▼] [◀] [3] [4] [▼] [▶] [3] [9] [▼]
To enter the data



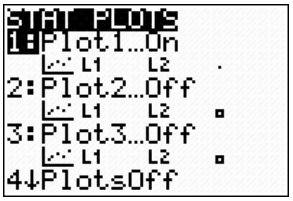
3. Press [WINDOW]



Press [0] [ENTER] [5] [0] [ENTER] [5] [ENTER] [0] [ENTER] [7] [0] [ENTER] [1] [0]
To enter window settings

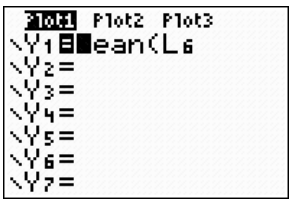


4. Press [2nd] [Y=]

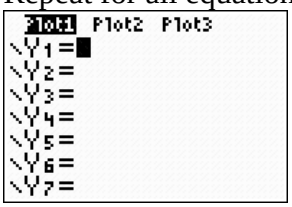


Press [1] [◀] [ENTER] [▼] [ENTER] [▼] [2nd] [1] [▼] [2nd] [2] [▼] [ENTER]
To switch on statplots

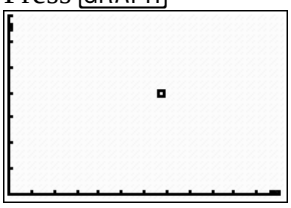
5. Press [Y=]



Press [CLEAR]
To clear equations
Repeat for all equations in Y=

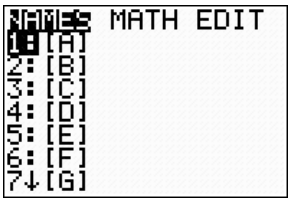


6. Press GRAPH

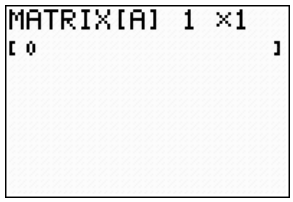


Finding the Model Using Matrices

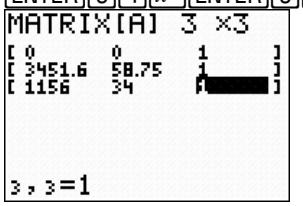
1. Press 2nd x^{-1}



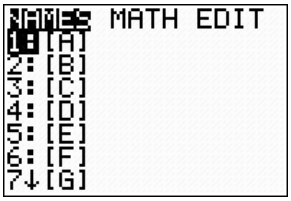
Press ▶ ▶ 1
To Edit [A]



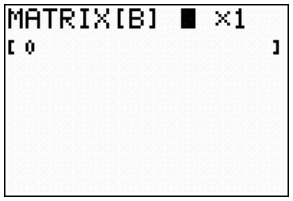
Press 3 ENTER 3 ENTER
0 ENTER 0 ENTER 1 ENTER
5 8 . 7 5 x^2 ENTER 5 8 . 7 5 ENTER 1
ENTER 3 4 x^2 ENTER 3 4 ENTER 1



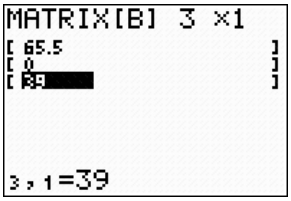
2. Press 2nd x^{-1}



Press ▶ ▶ 2
To Edit [B]

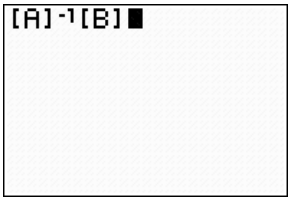


Press 3 ENTER 1 ENTER
6 5 . 5 ENTER 0 ENTER 3 9 ENTER

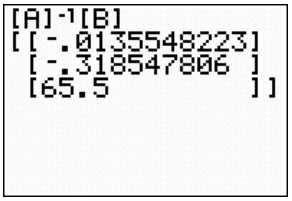


3. Press MODE
To go to the Home screen
Press CLEAR
To Clear the Home Screen

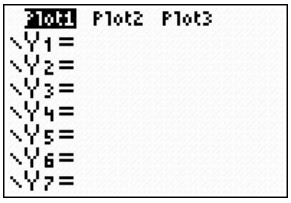
Press 2nd x^{-1} 1 x^{-1}
Press 2nd x^{-1} 2



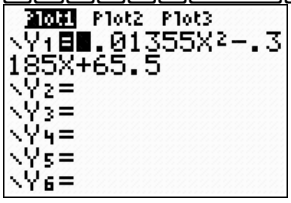
Press ENTER



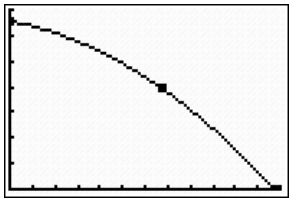
4. Press Y=



Press (-) . 0 1 3 5 5 X,T,Θ,*n* x^2
− . 3 1 8 7 X,T,Θ,*n* + 6 5 . 5

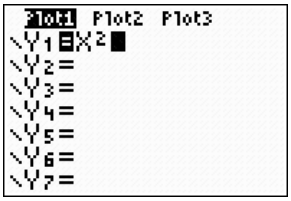


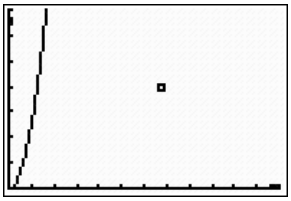
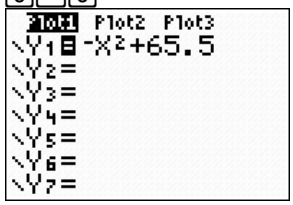
Press GRAPH

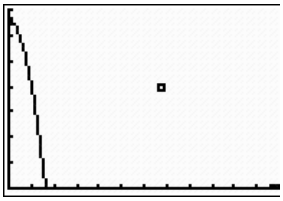


Finding the Model Using Transformations of $y = x^2$

1. Press [Y=][X,T,Θ,n][x^2] Press [GRAPH] Press [Y=][(-)][X,T,Θ,n][x^2][+][6][5][.][5] Press [GRAPH]

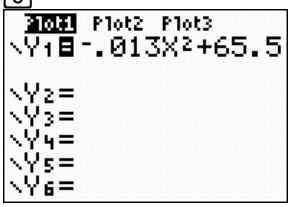


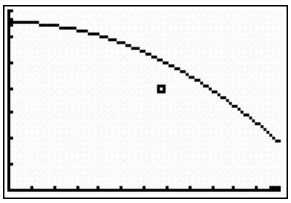
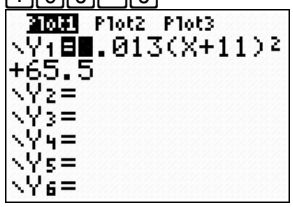



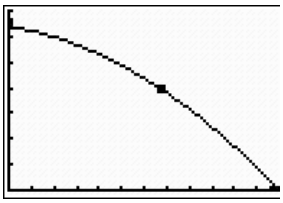


This process may take many repetitive steps to make the necessary transformations for the model to fit the data. The process has been shortened for this tutorial.

2. Press [Y=][(-)][.][0][1][3][X,T,Θ,n][x^2][+][6][5][.][5] Press [GRAPH] Press [Y=][(-)][.][0][1][3][(][X,T,Θ,n][+][1][1][)][x^2][+][6][5][.][5] Press [GRAPH]

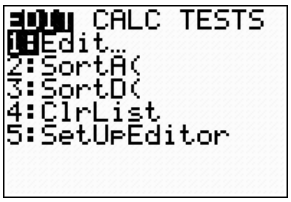


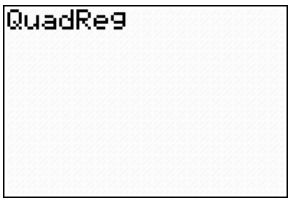



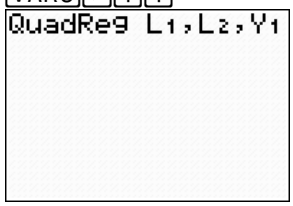


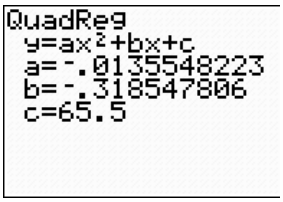
Finding the Model Using Regression

1. Press [STAT] Press [▶][5] Press [2nd][1][,][2nd][2][,][VARS][▶][1][1] Press [ENTER]

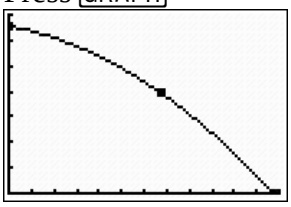






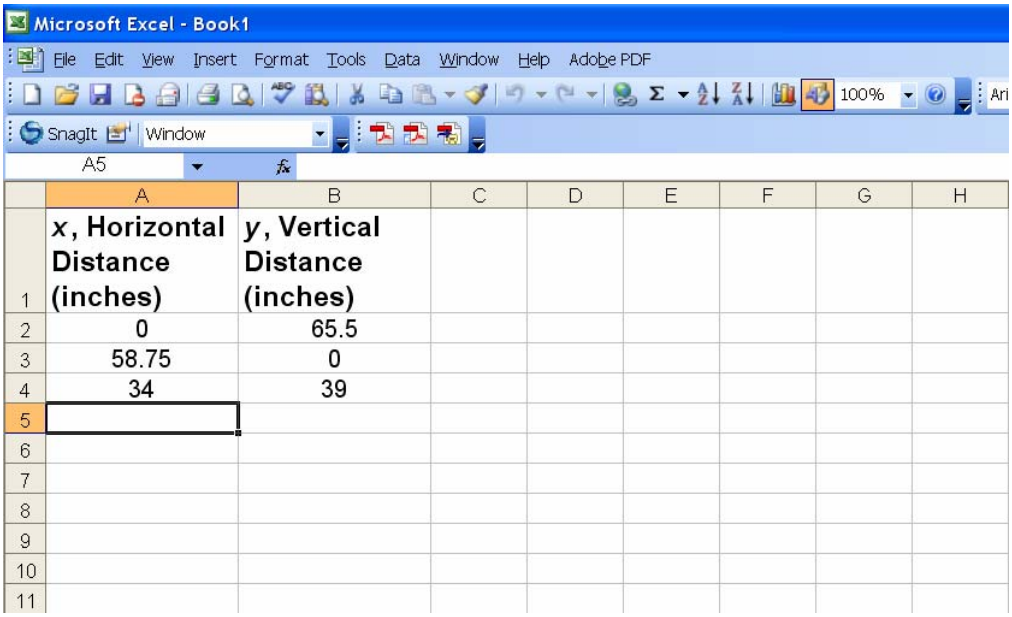


2. Press [GRAPH]

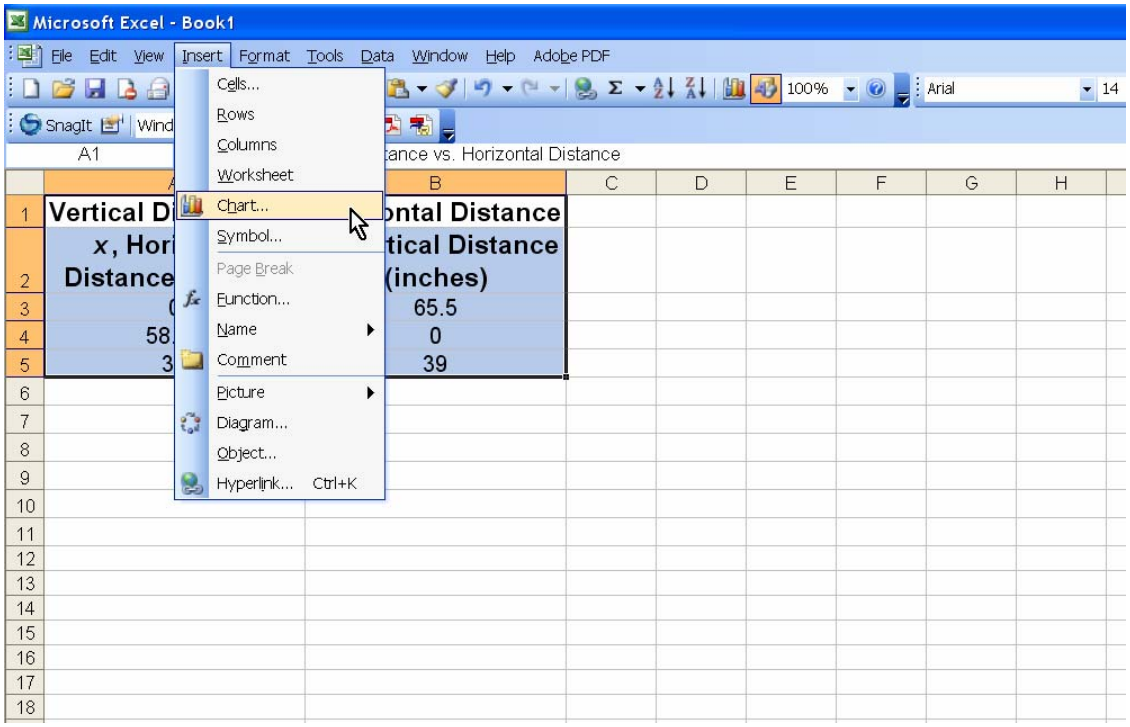


Finding the Model Using Microsoft Excel

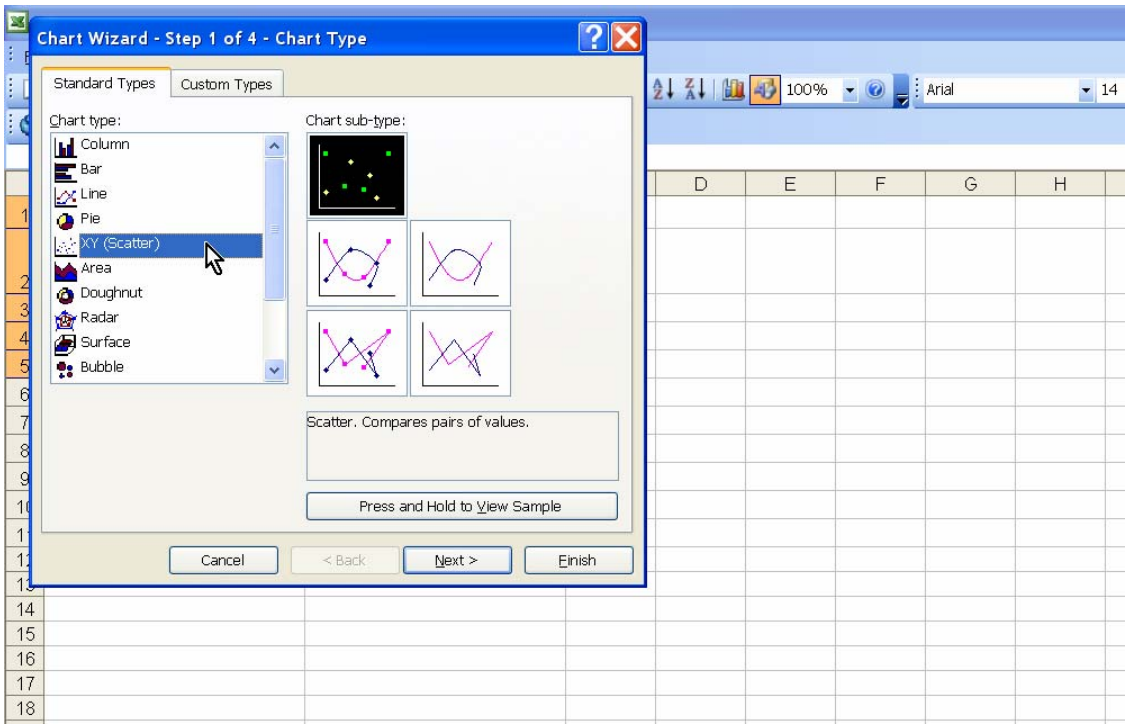
1. Enter column headings and data into the spreadsheet.



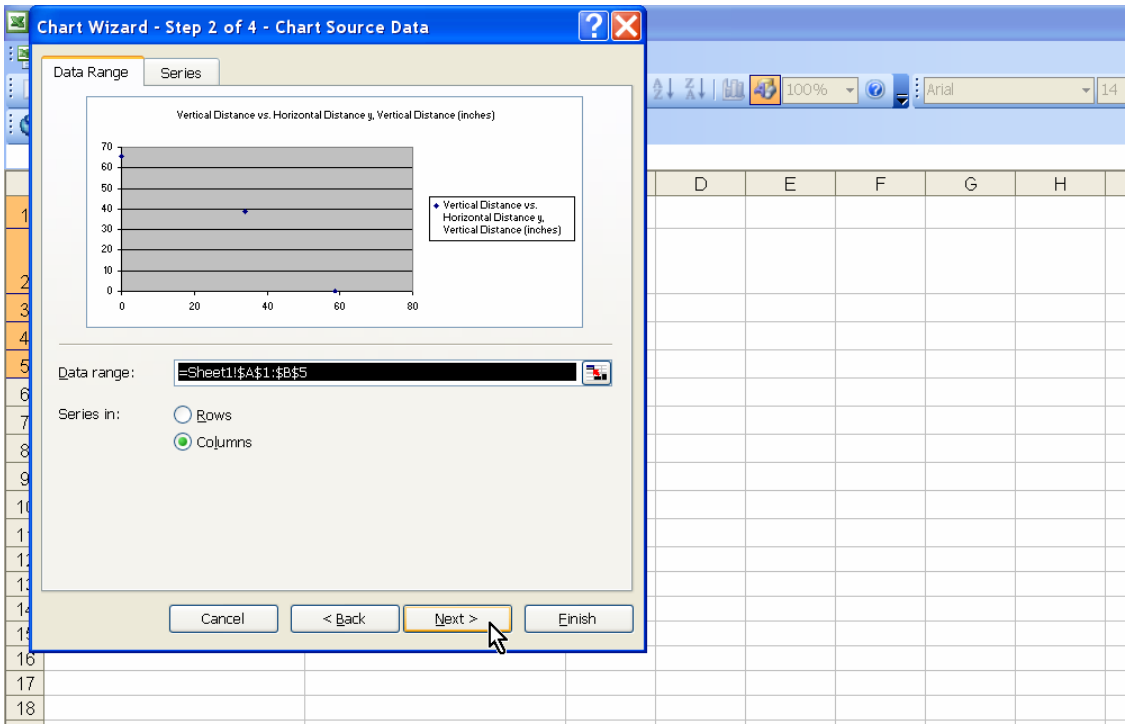
2. Select the data by clicking in the first cell, holding down shift and clicking in the last cell. Next choose **Chart** from the **Insert** menu.



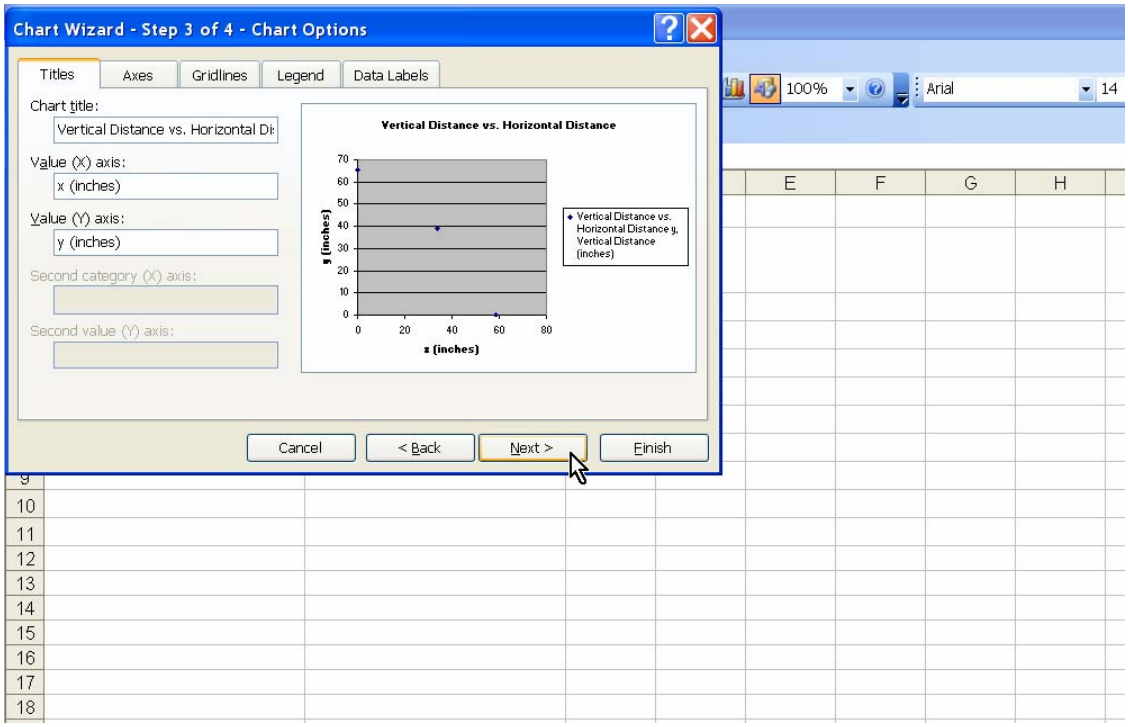
3. Select **XY (Scatter)** then click **Next**.



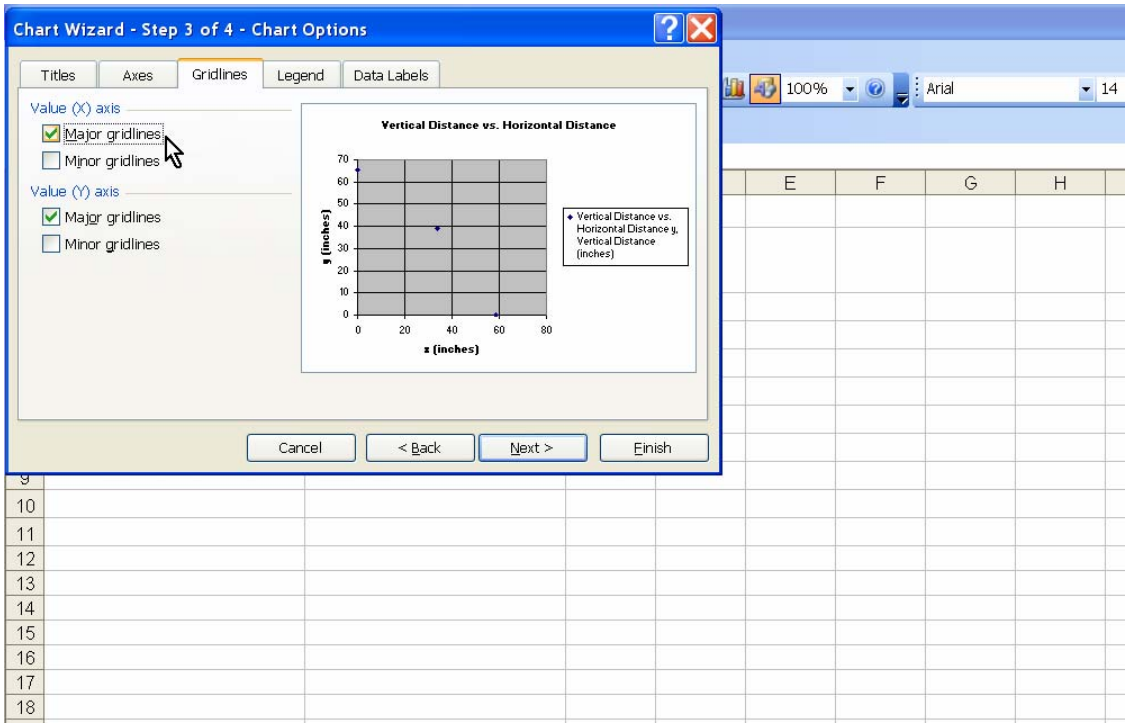
4. Click **Next**.



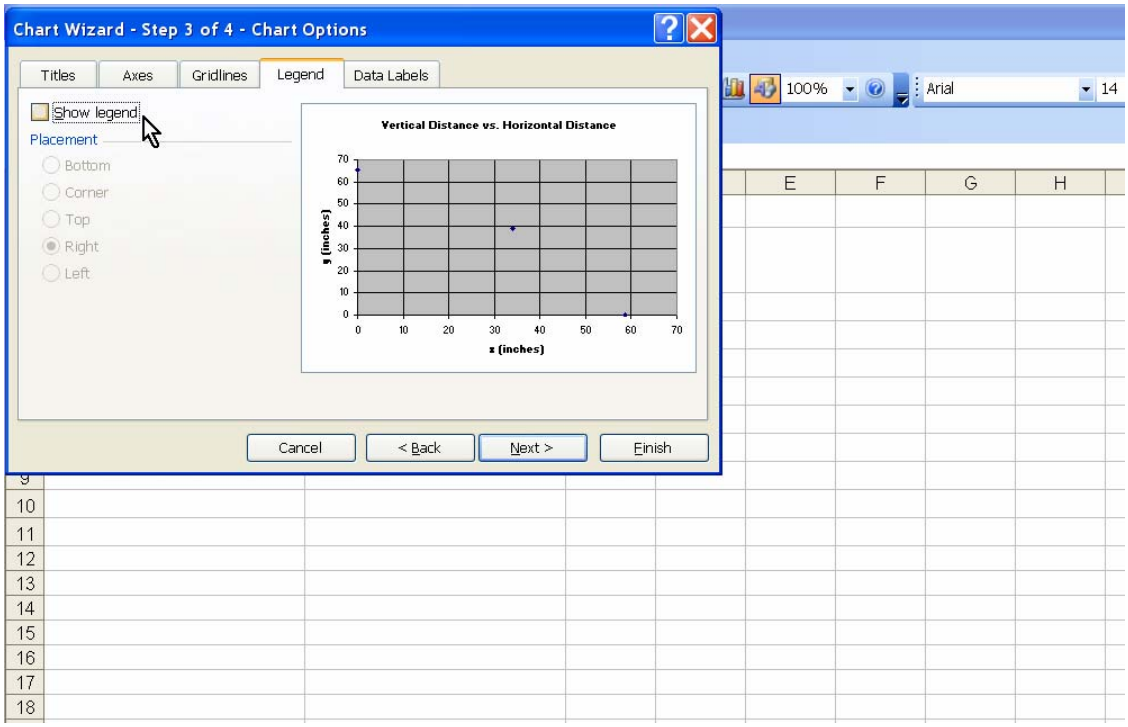
5. Click on the **Titles** tab and enter labels for the *Chart title*, the *Value (X) axis*, and the *Value (Y) axis*.



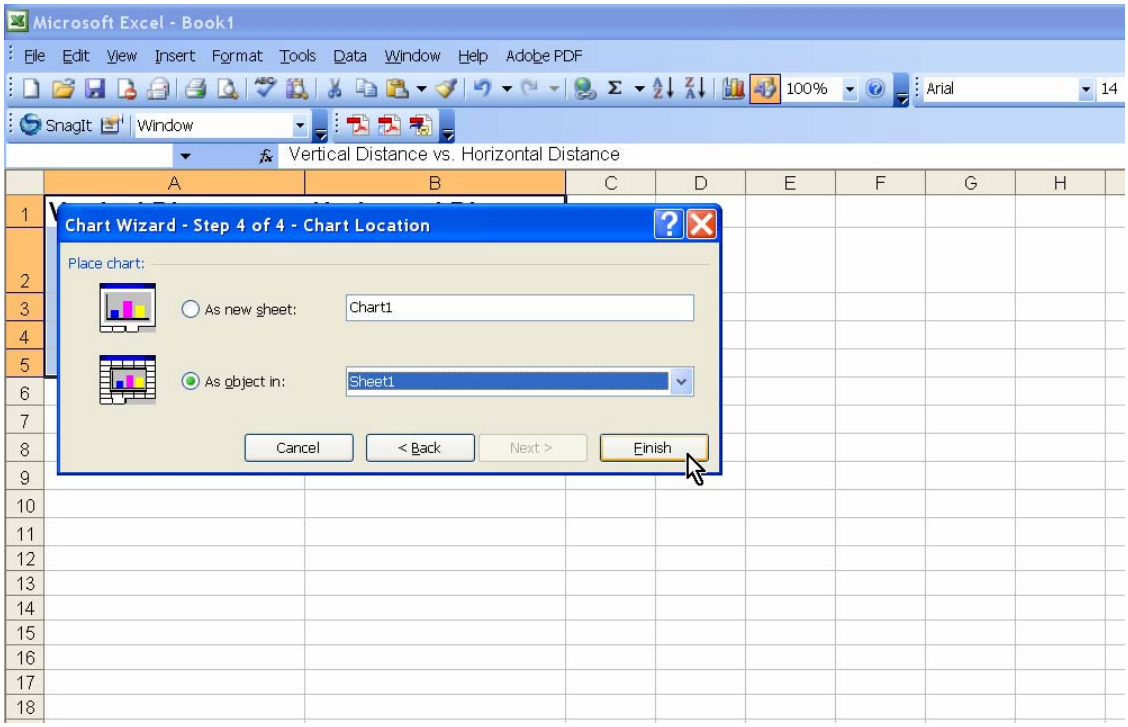
6. Click on the **Gridlines** tab and select the **Major gridlines** under **Value (X) axis**.



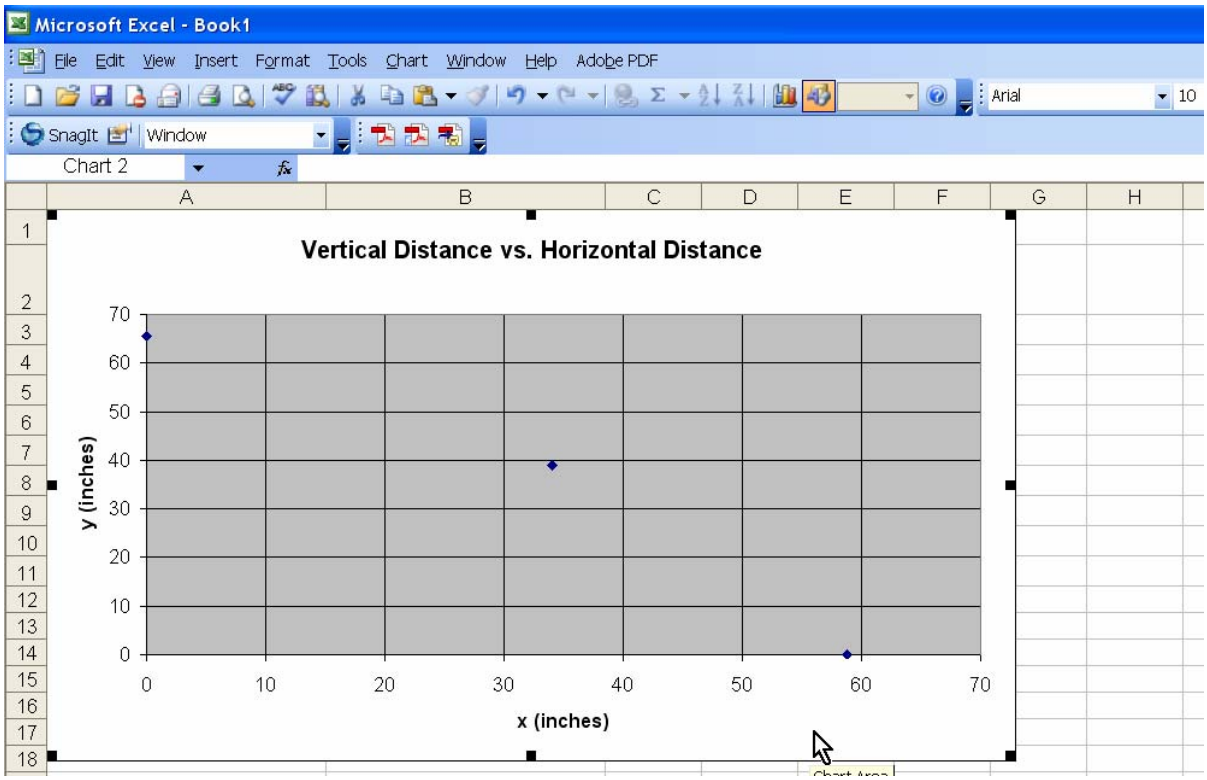
7. Click on the **Legend** tab and deselect **Show legend** then click **Next**.



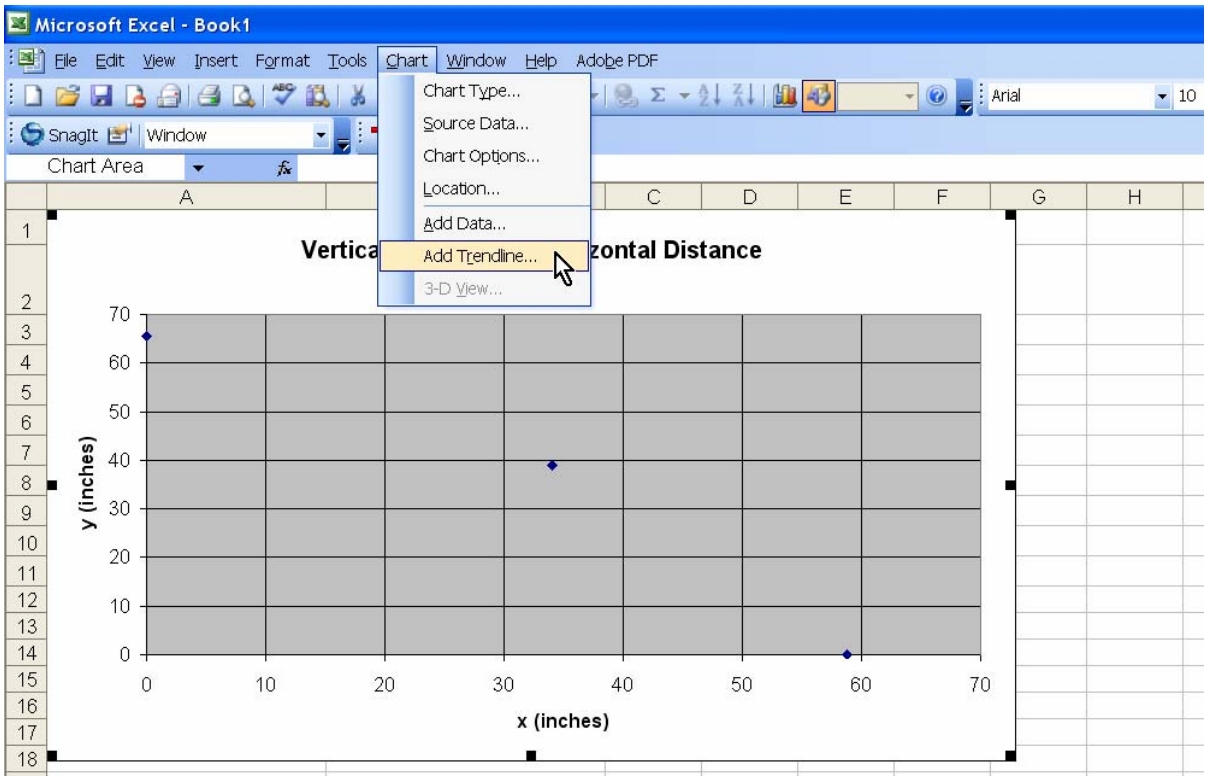
8. Click **Finish**.



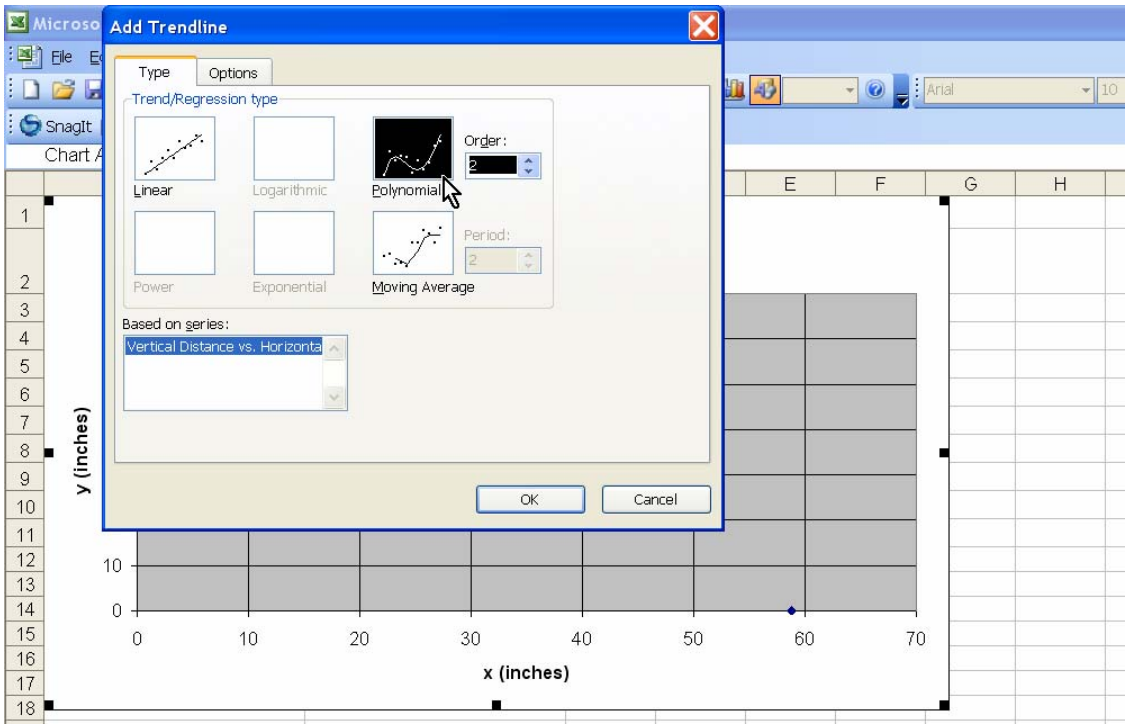
9. Select the chart by clicking on its outer border.



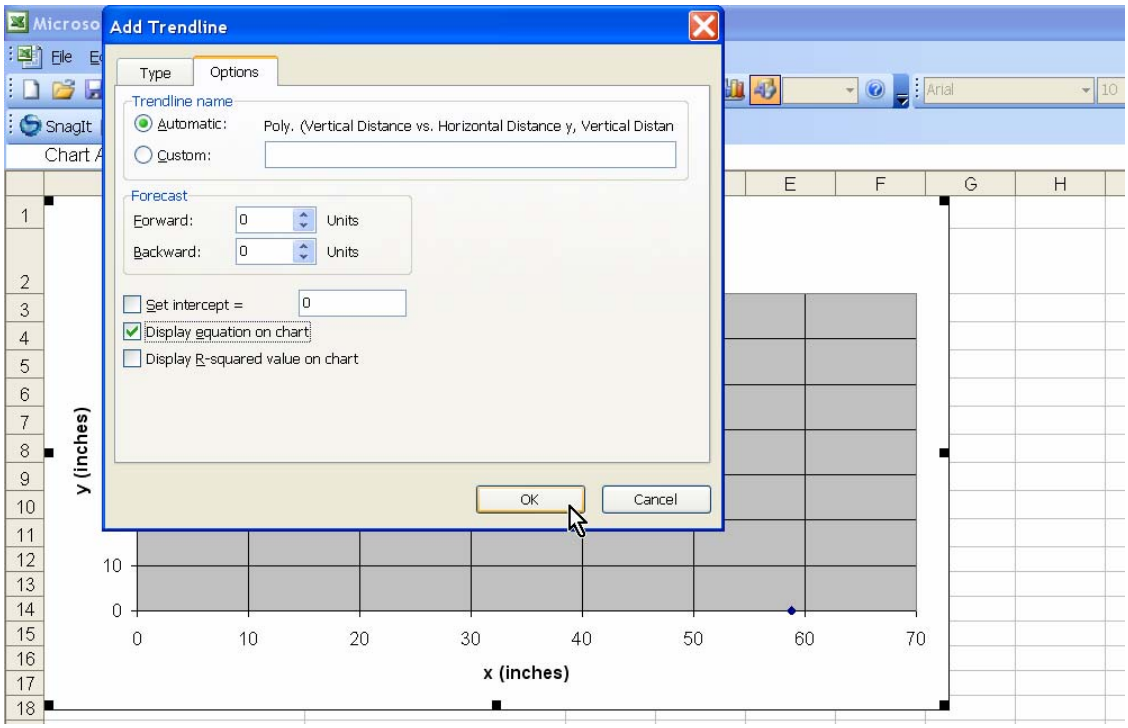
10. Choose **Add Trendline** from the **Chart** menu.

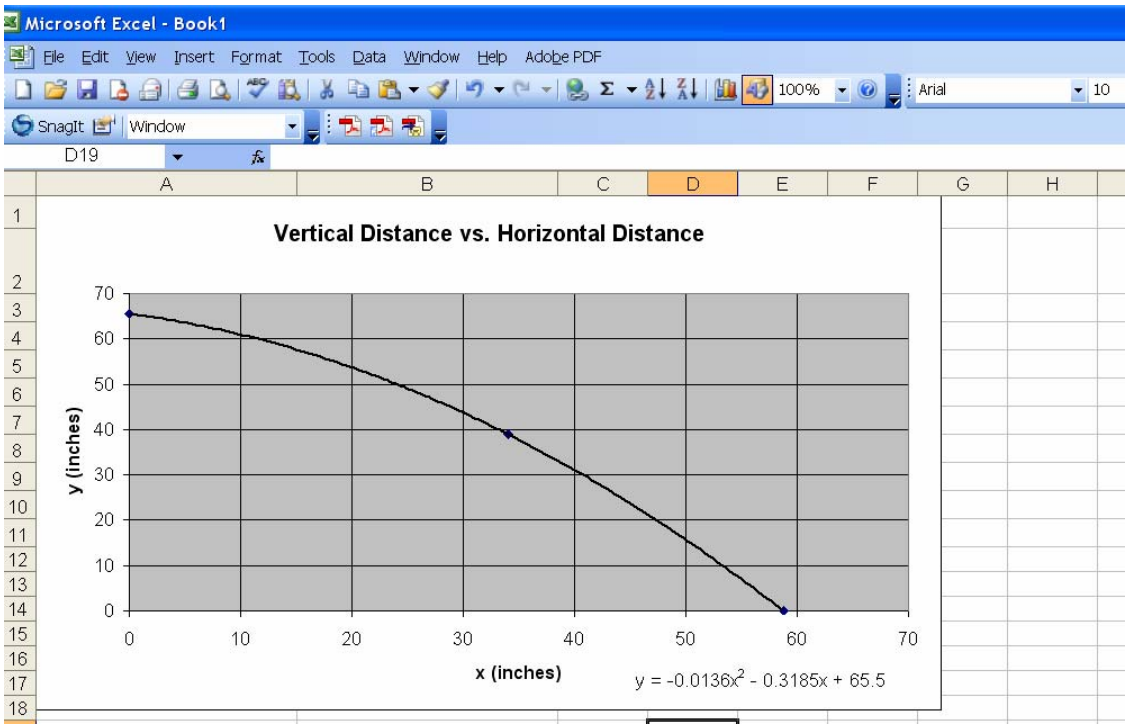


11. Select **Polynomial** and set the **Order** to 2 then click the **Options** tab.



12. Select the **Display equation on chart** check box then click **OK**.




Microsoft Excel - Book1
File Edit View Insert Format Tools Data Window Help Adobe PDF
SnagIt Window
D19
Vertical Distance vs. Horizontal Distance
y (inches)
x (inches)
0 10 20 30 40 50 60 70
y = -0.0136x2 - 0.3185x + 65.5