Answers: Graphs and Gradients in Excel

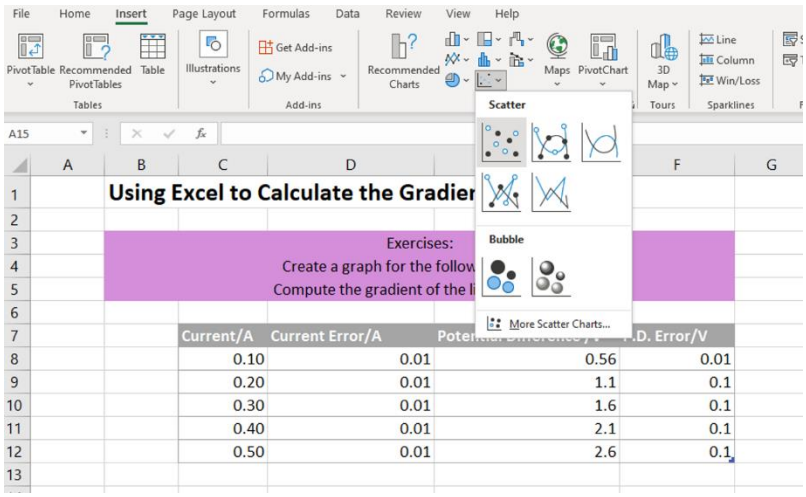
Here's a step-by-step guide in case you needed a little help!

Contents:

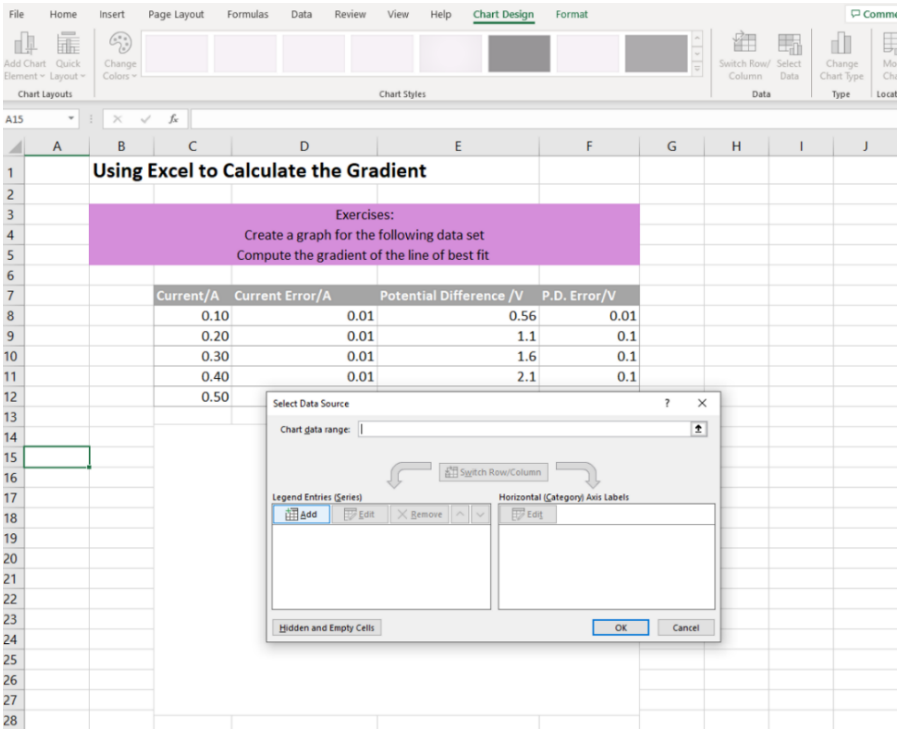
- Graphs
- Adding Error Bars
- LINEST

Graphs:

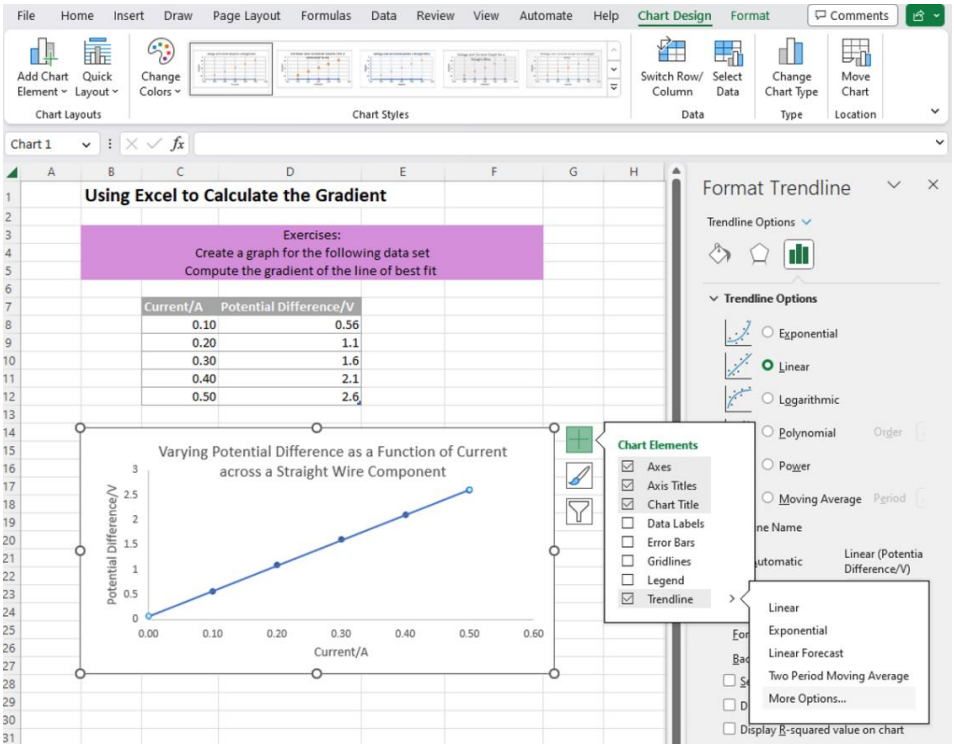
1. You can create a graph by clicking Insert. Scatter graphs are commonly used in physics.



2. To add data to your graph, click Chart Design >> Select Data



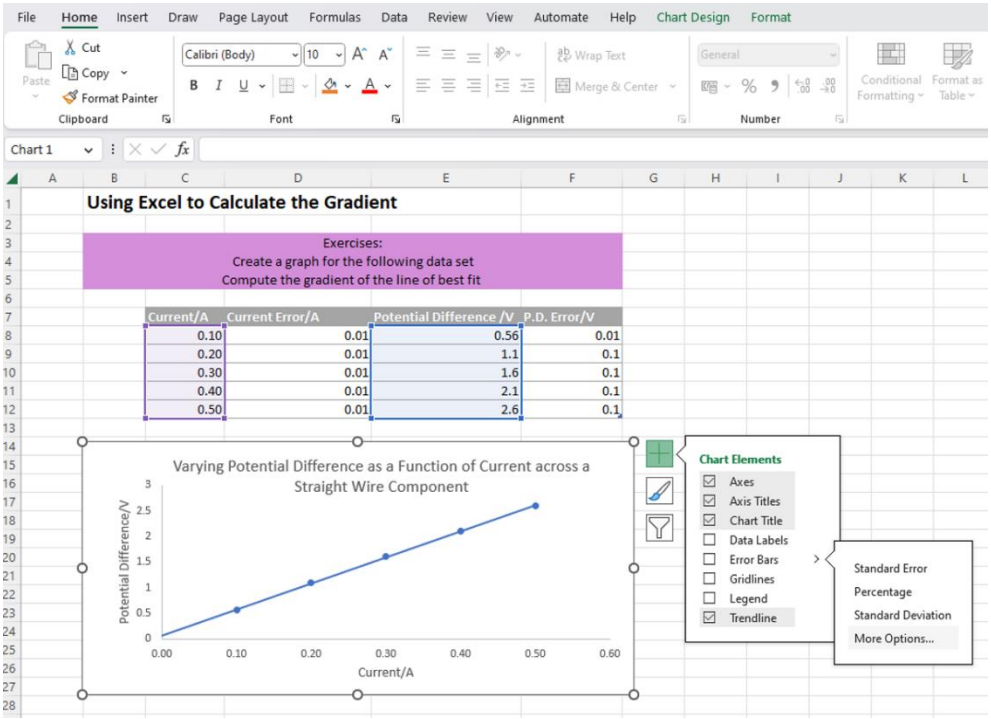
3. To add more details to your graph, you can access Chart Elements via the + icon. This allows you to add an Axis Title, Error Bars, Trendline, etc. You can access further design features by clicking More Options…



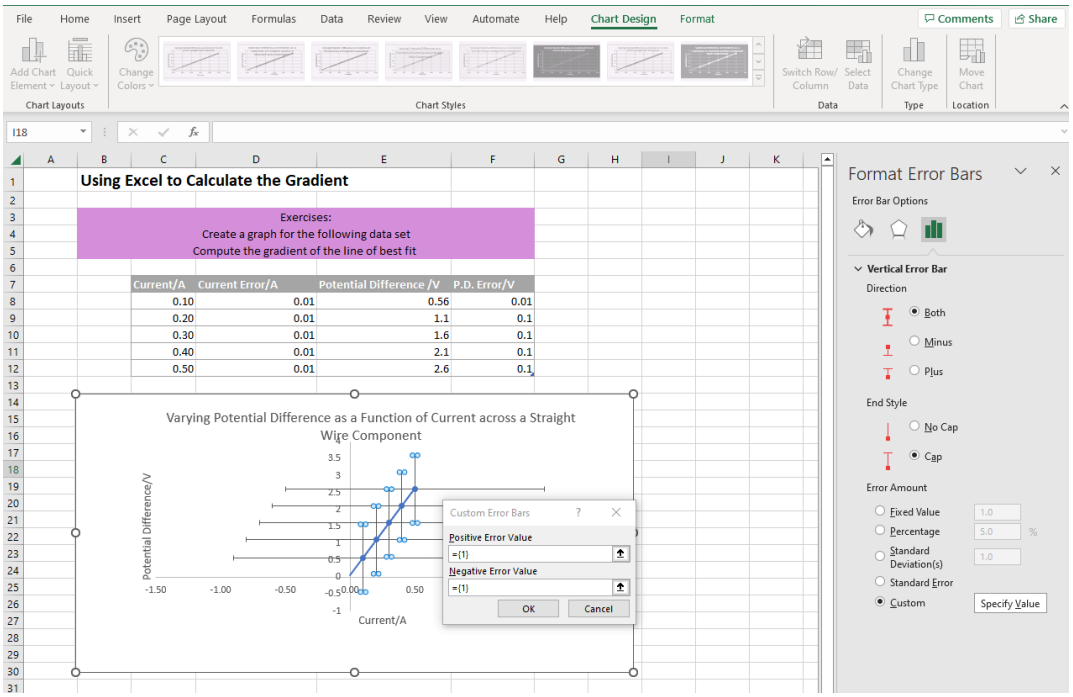
Adding Error Bars:

Errors are very important in physics so your graphs should show the errors associated with each variable! You can add errors from your table as follows:

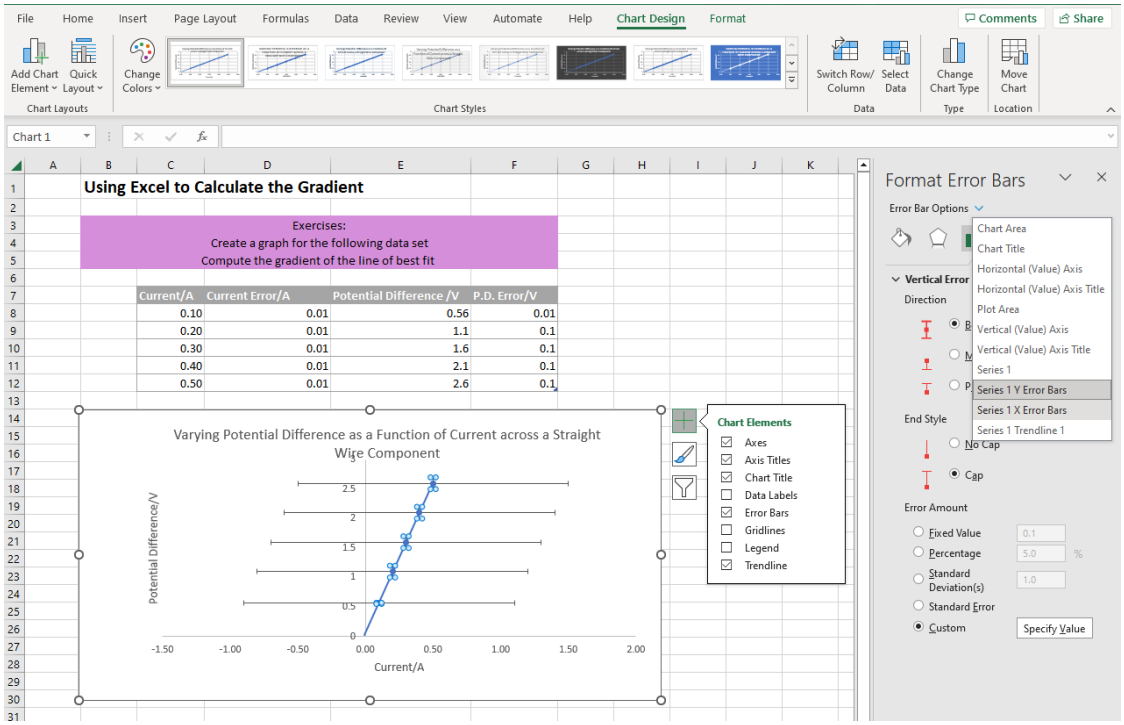
1. Chart Elements (‘+’ symbol) << Error Bars << More Options

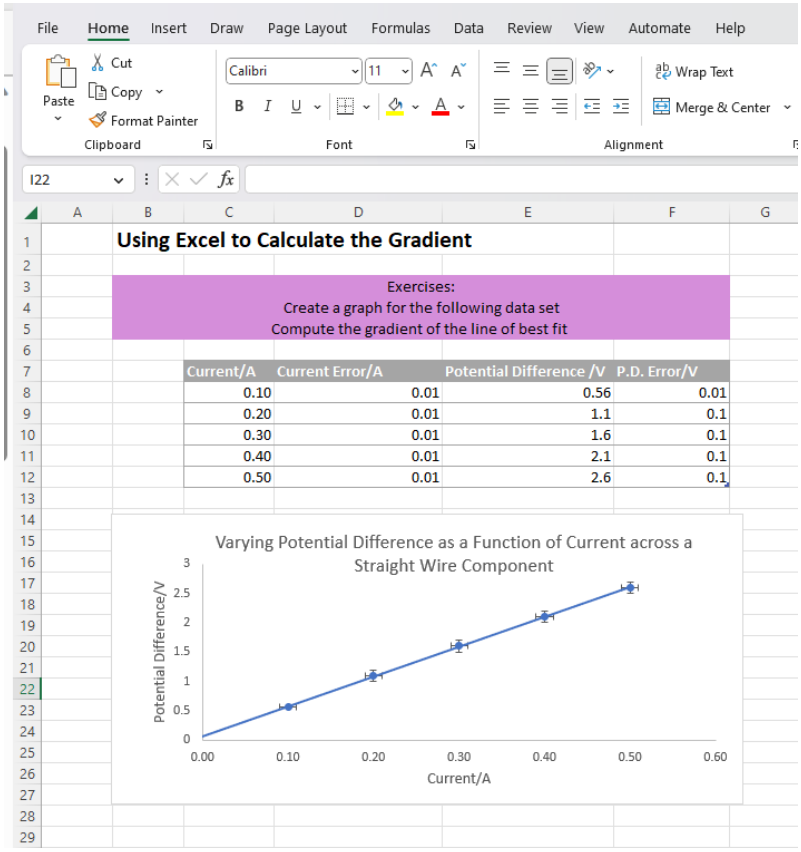


2. You can add your own values by clicking “Specific Values” under “Custom”. This allows you to input the positive and negative error values.



3. To access the other axis, click on the “Error Bar Options” drop down. This will provide more customisation options, including both the X and Y Error Bars

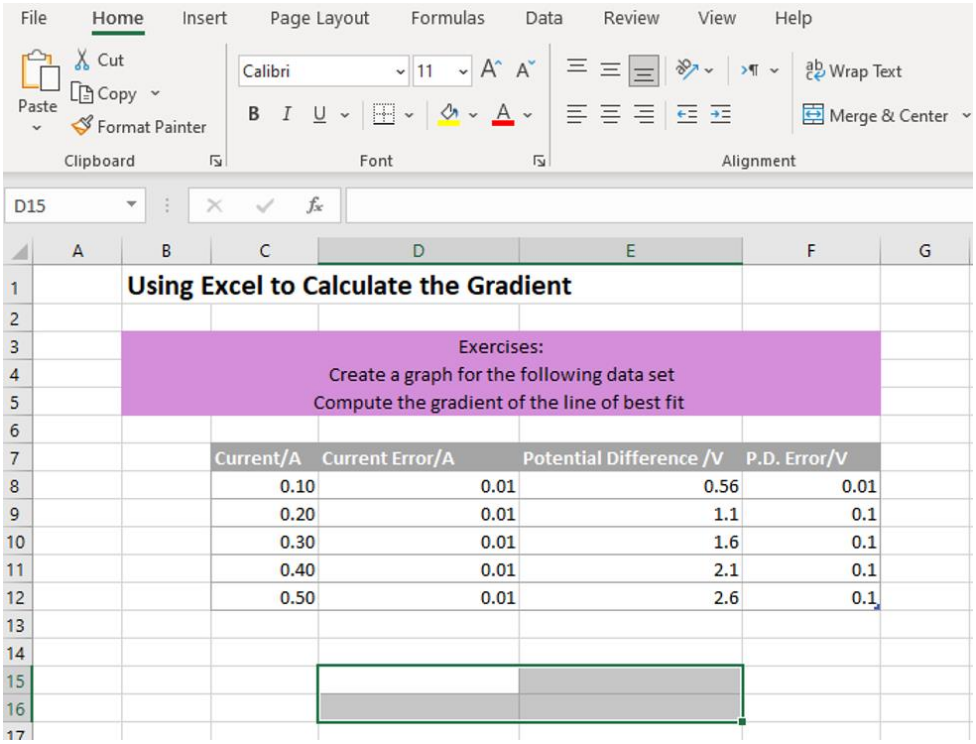




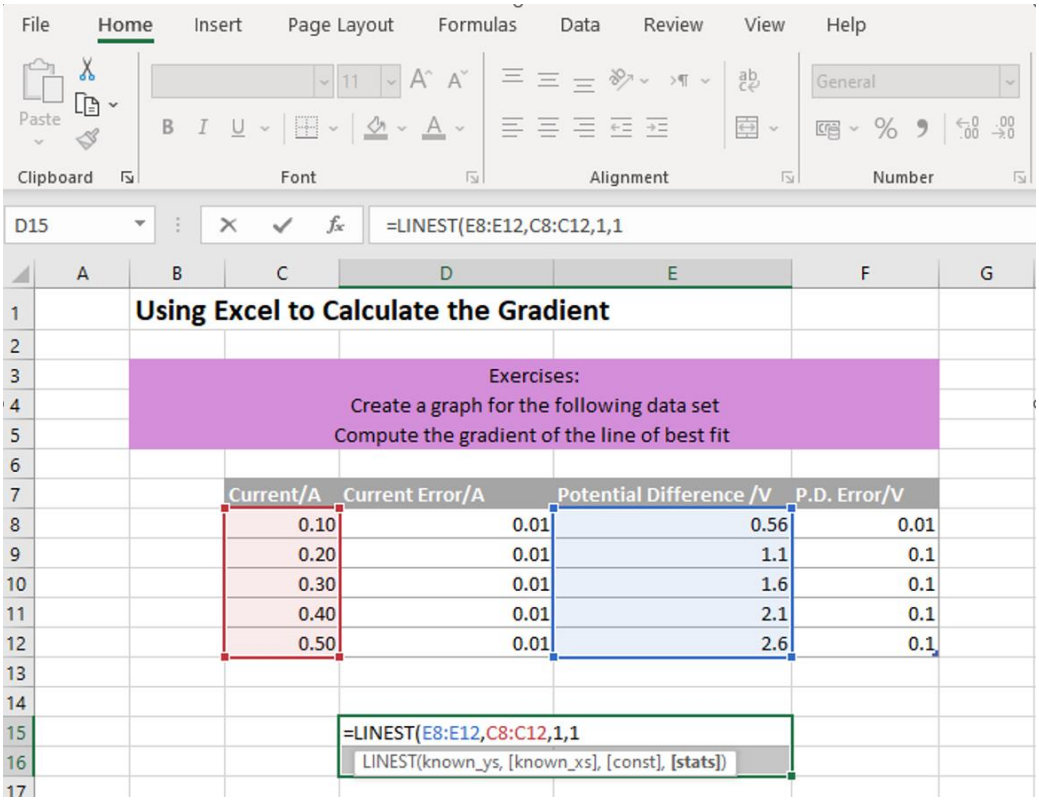
Now that you have a nice graph it's time to calculate the gradient!

LINEST:

1. Select 4 squares where you would like the results to be presented.



2. Type =LINEST([select all the y values], [select all the x values], 1, 1)



3. **IMPORTANT**: then press Ctrl + Shift + Enter.