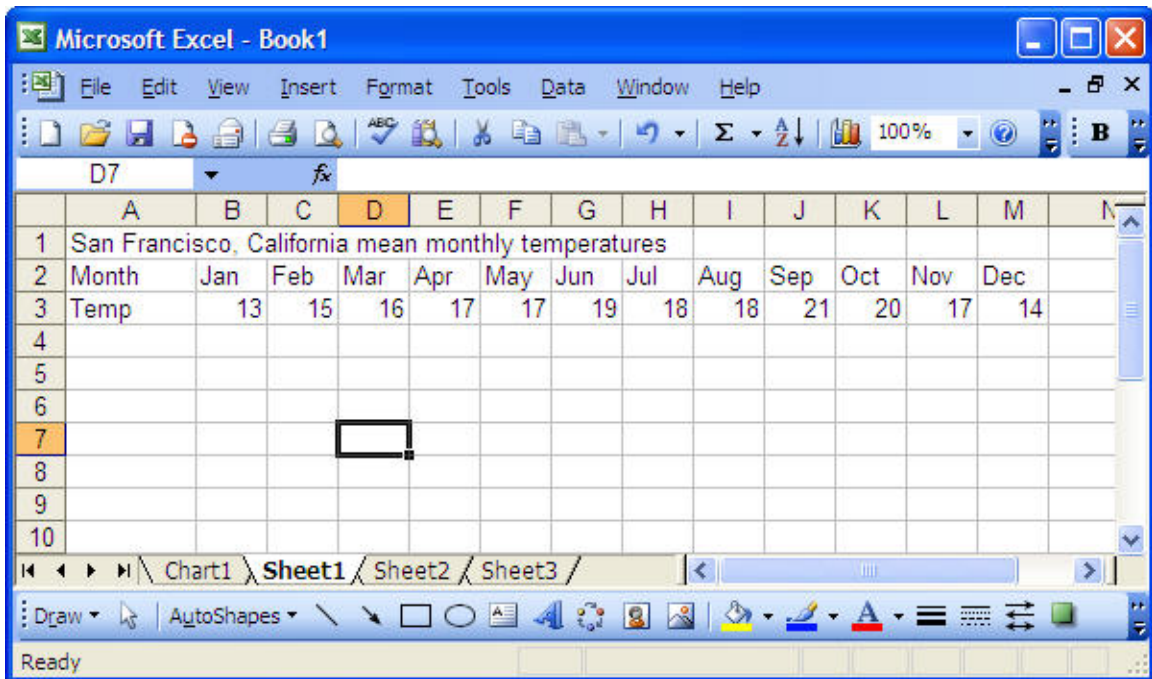
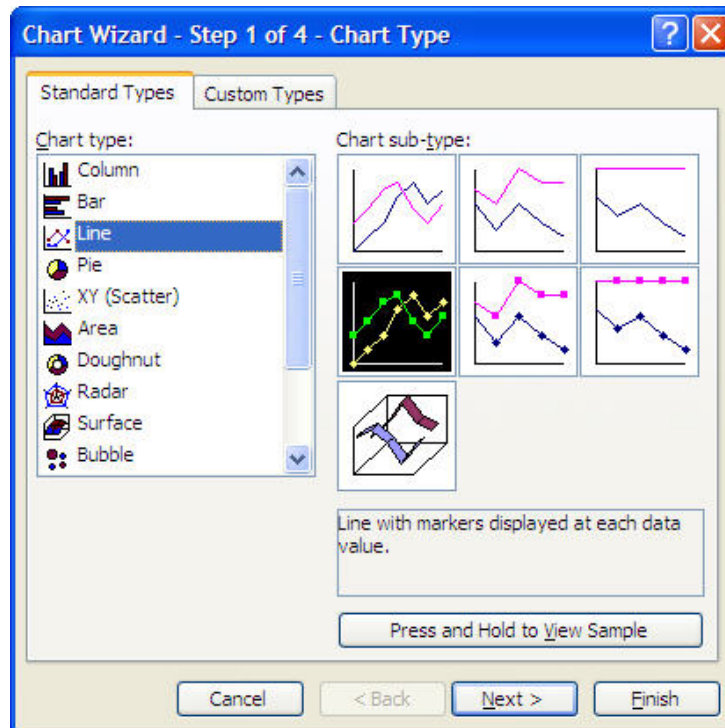


How to make a line graph in Microsoft Excel. For this example we will graph the average monthly temperature of San Francisco, California based on the data presented on page 67 of the lab manual.

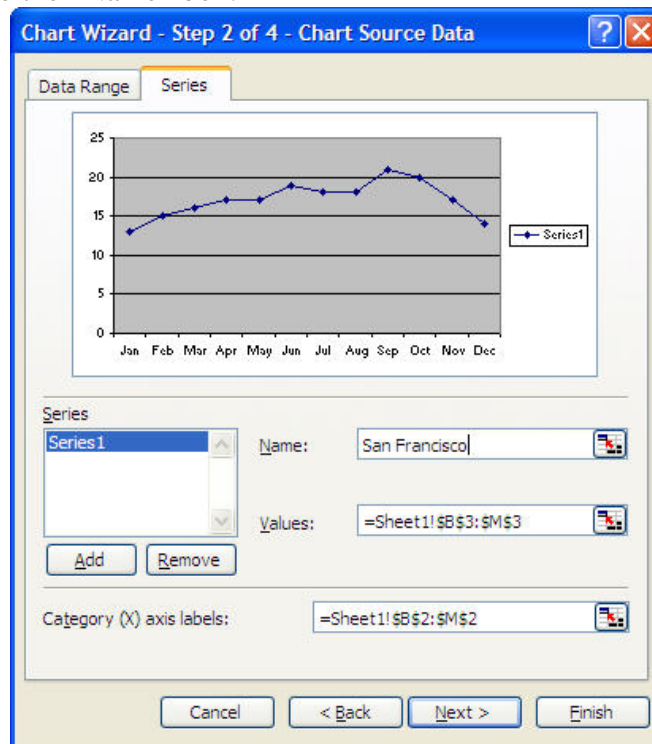
1. Open Microsoft Excel and type in the data as it appears in the lab manual for San Francisco's average monthly temperatures. It should look something like the following when finished.



2. Select the cells that contain the temperature data and months by clicking and dragging. Then press the graphing wizard button located on the toolbar (it looks like a bar graph).
3. The chart wizard will open. Select the "Line" graph function on the left side panel and select the "Line with markers" choice on the right panel.

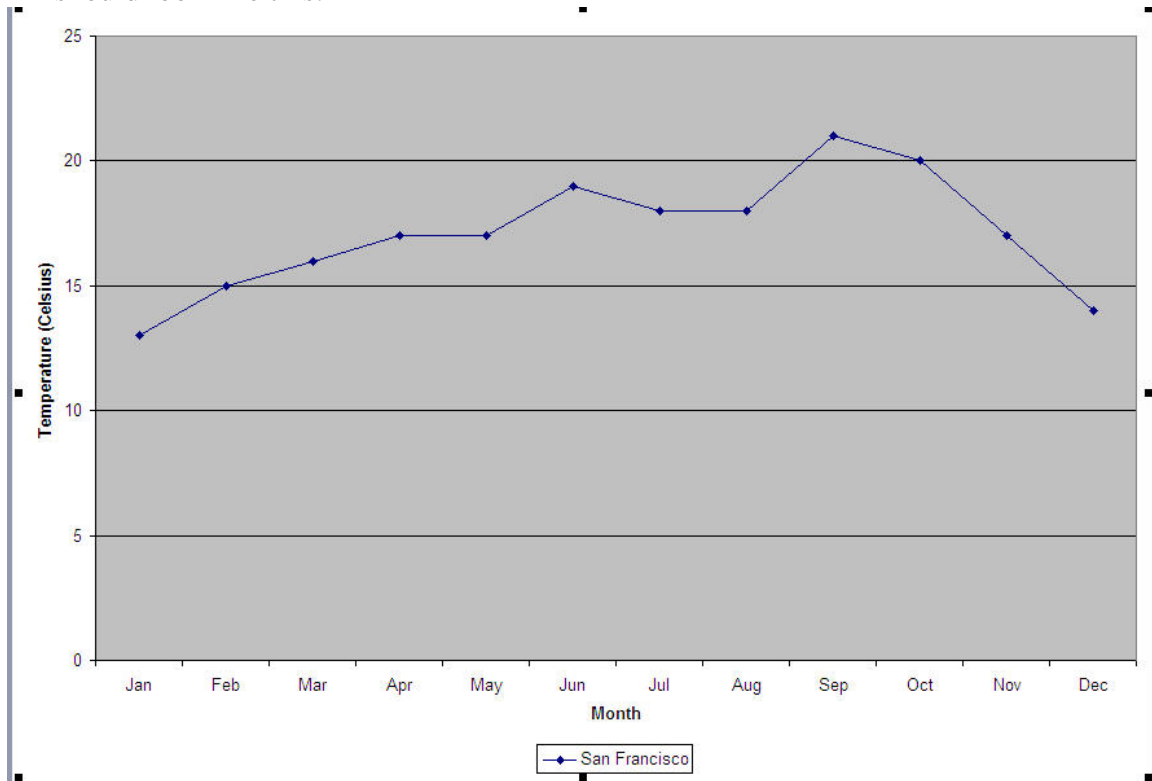


4. Press “Next”. The chart wizard will show a sketch of what the graph will look like. Click on the “Series” tab at the top. Rename the series as “San Francisco” by typing into the “Name” box.

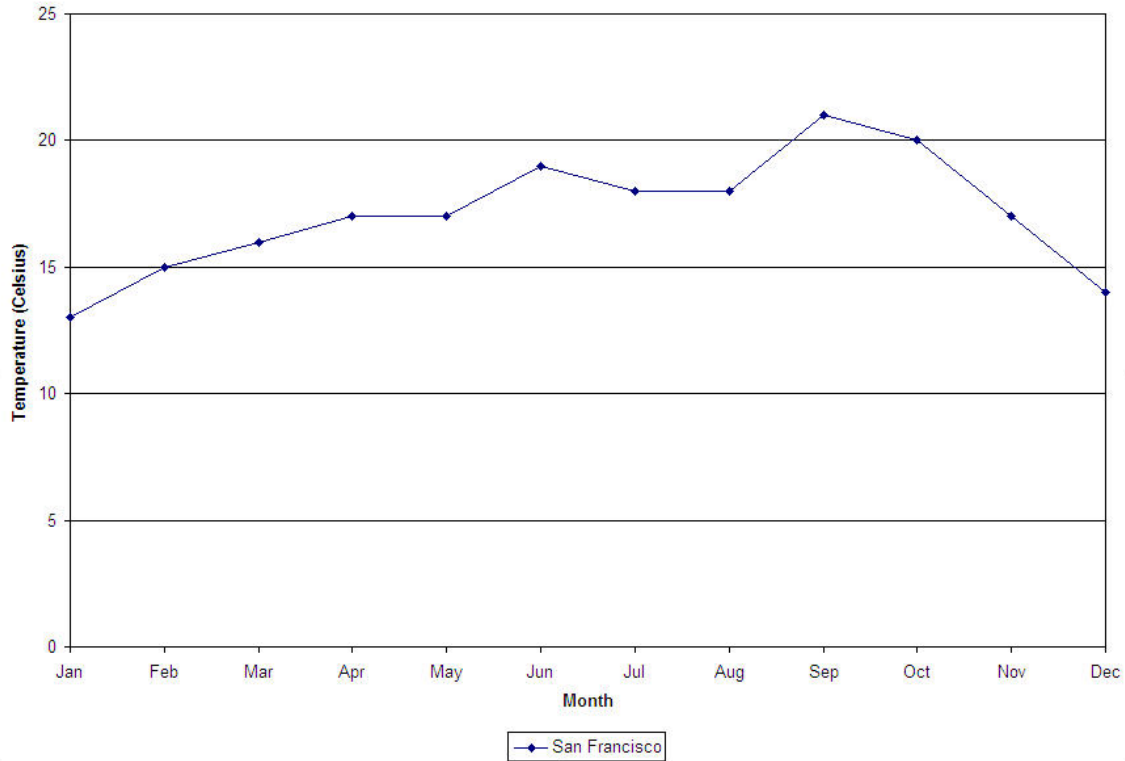


5. Click “Next”.
6. Delete the “Chart Title”. You can add a title properly in Microsoft Word.

7. Name the X-axis "Month"
8. Name the Y-axis "Temperature (Celsius)"
9. Click on the "Legend" tab at the top of the window and change the placement to "Bottom".
10. Click "Next"
11. Place the chart into a new sheet called "San Francisco"
12. Click Finish.
13. You will now have a new sheet called "San Francisco" with your figure in it. It should look like this:



14. You will notice that the line on the graph does not extend all the way to the ends of the graph area which. To correct this right click on the X-axis. Select "Format axis". Click on the "Scale" tab. Uncheck the box "Value (Y) axis cross between categories".
15. Right click on the grey area of the graph. Select "Format Plot Area". Select "None" for area color on the right hand side of the window. Your graph should look like the following.



16. Next we can reduce the amount of unused graph space by changing the Y-axis scale. Right click on the Y-axis and choose “Format Axis”. Click on the “Scale” tab. You will notice that the temperature never goes below 12°C and the maximum value never goes above 22 so change the “Minimum” and “Maximum” values to 12 and 22, respectively.
17. You will notice that the graph line is very thin and disappears behind the grid lines at some points along its length. Now we will change the thickness of the line on the graph.
18. Right click on the data line anywhere along its length.
19. Choose “Format Data Series”. On the “Patterns” tab you will see that the left side of the panel controls the line properties. Let’s change the color to black and the maximum thickness.
20. On the right side of the panel you will see that it controls the marker properties. Let’s make them black (foreground and background) squares. Click “OK” when finished.
21. Your figure should look like the following:

