Mean, SD and Graphing in Excel 2007

1. Open Excel and enter your data in columns. You can label the columns if you prefer. For example:

<table>
<thead>
<tr>
<th>BOY</th>
<th>GIRL</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>12</td>
<td>76</td>
</tr>
<tr>
<td>45</td>
<td>58</td>
</tr>
<tr>
<td>78</td>
<td>36</td>
</tr>
<tr>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>45</td>
<td>6</td>
</tr>
<tr>
<td>78</td>
<td>53</td>
</tr>
<tr>
<td>97</td>
<td>79</td>
</tr>
</tbody>
</table>

2. To calculate mean:
   a. Click on the box in which you want the mean to be placed
   b. Click the formulas tab at the top of the screen
   c. Select the “insert function button”
   d. A new box pops up. Search to find the AVERAGE option, click OK
   e. Highlight the data of which you want the average to be calculated, click OK
3. To calculate standard deviation
   a. Click on the box in which you want the SD to be placed
   b. Click the formulas tab at the top of the screen
   c. Select the “insert function button”
   d. Search to find the STDEV option, click OK
   e. Highlight the data of which you want the SD to be calculated, click OK.
   f. NOTE: be sure not to select the mean as one of your data points for calculating standard deviation. This is a common mistake.

4. To select the correct number of digits for your answer (remember, you want correct precision)
   a. Select the top box between row 1 and column A. This should highlight your entire spreadsheet.
      ![Image of a spreadsheet with highlighted rows and columns]
   b. Click the HOME tab along the top
   c. Select format cells and then format cells again.
      ![Image of the HOME tab with Format Cells highlighted]
   d. Select number, and indicate the number of decimal places you want included. Hit OK.
5. To graph
   a. Along the top, select INSERT
   b. Highlight the column headings (i.e. boy/girl), hold down the CTRL key and highlight the means
   c. Select the type of graph you want

d. When you click on the graph, a new set of tools opens up, called CHART TOOLS. From this you can change the chart layout (do this to add a title) or bar colors.
e. Within your graph, click on and delete the key that says “series 1”

f. To add axis labs, select the LAYOUT tab under CHART TOOLS and choose the “axis titles” option.

6. To add SD error bars
   a. Click anywhere on the graph to open the chart tools
   b. Click the layout tab
   c. Select error bars and then more error bar options.

   d. Select custom and specify value
e. A little box comes up that looks like:

f. Delete what is in each box

g. For EACH box (positive and negative) select the cells on the Excel page that include the standard deviations. Highlight them all at once.

h. Hit ok.