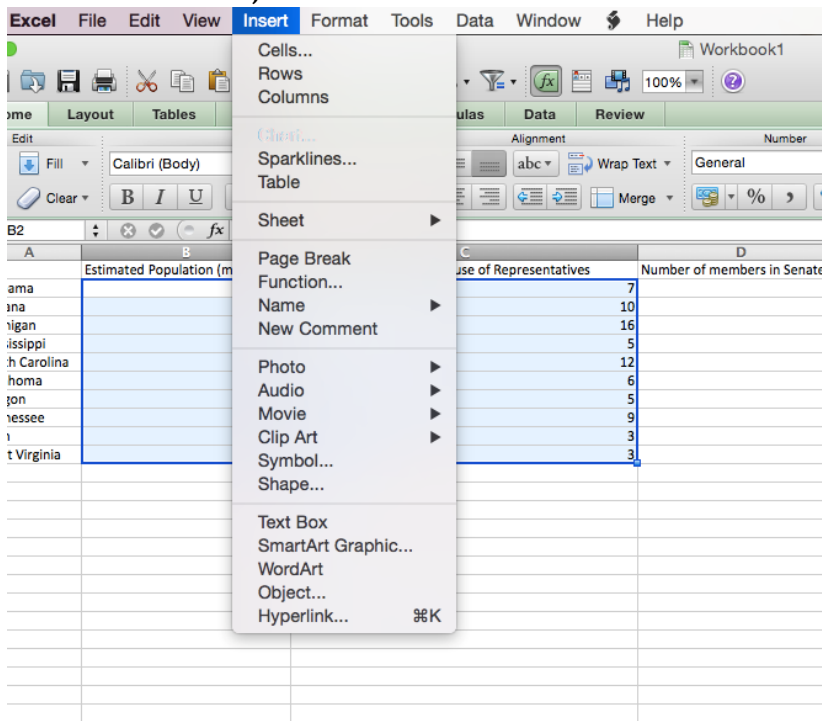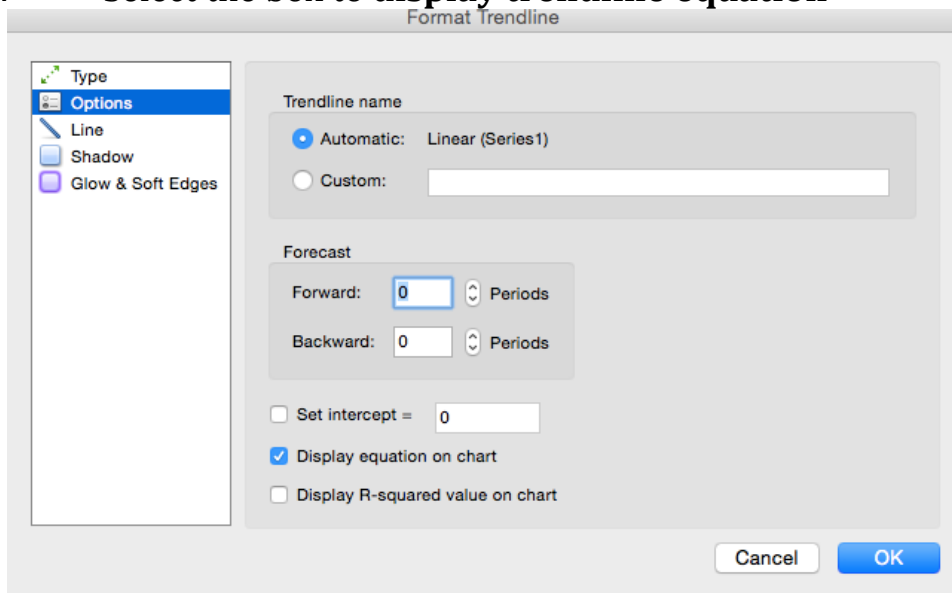# Excel Correlation Lab

1. Download and open the excel file from the course webpage.
2. Type your name into cell H1.
3. Save your file as **ExcelCorrelationLabFirstNameLastName.xlsx** Replacing FirstName LastName with your personal details.
4. Select the estimated population and number of member in house of representatives by left clicking and dragging the cursor to select the data.

	A	B Estimated Population (millions)	C Number of members in House of Representatives	D Number of members in Senate
1		Estimated Population (millions)	Number of members in House of Representatives	Number of members in Senate
2	Alabama	4.4	7	2
3	Indiana	5.9	10	2
4	Michigan	9.9	16	2
5	Mississippi	2.8	5	2
6	North Carolina	7.7	12	2
7	Oklahoma	3.4	6	2
8	Oregon	3.3	5	2
9	Tennessee	5.5	9	2
10	Utah	2.1	3	2
11	West Virginia	1.8	3	2
12				
13				
14				

5. From the menu, select **Insert > Chart**

6. Select the **Scatter > Mixed Scatter Plot**

7.
8. Under **Chart Layout** Select **Trend Line > Linear**

$$y = 1.6x + 0.1118$$

9. Under **Trendline** go to **Trendline Options**

10.   Select the box to **display trendline equation**

11.   Click on a cell, then type **=Correl(**
12.   Select the estimated population data
13.   Type a comma ,
14.   Select the number of memebers in house of representatives

15.   Your formula should look like this:

Estimated Population (millions)	Number of members in House of Representatives
4.4	7
5.9	10
9.9	16
2.8	5
7.7	12
3.4	6
3.3	5
5.5	9
2.1	3
1.8	3

=Correl(B2:B11,C2:C11)

16.   Hit enter
17.   Notice the correlation coefficient is very close to 1. This shows a strong positive correlation.
18.   Save your file again and email it to math.mr.mitchell@gmail.com with the subject line "Excel Correlation Lab First Name Last Name".