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	В	C	D
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
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5. From the menu, select **Insert > Chart**

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

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

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

 ✓[*] Type Options Line Shadow Glow & Soft Edges 	Trendline name Automatic: Linear (Series1) Custom:
	Forecast Forward: 0 C Periods Backward: 0 C Periods
	 Set intercept = 0 Display equation on chart Display R-squared value on chart
	Cancel OK

- 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	4.4		7
	5.9		10
9	9.9		16
	2.8		5
-	7.7		12
3	3.4		6
3	3.3		5
5	5.5		9
	2.1		3
1	1.8		3_
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=Correl(B2:B11,C2:C11)			v = 1
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- 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 <u>math.mr.mitchell@gmail.com</u> with the subject line "Excel Correlation Lab First Name Last Name".