**Population and Representation**

Each person (or pair) is going to research the relationship between the population of a state and the number of representatives that state elects to the United States House of Representatives.

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| **Doing the Research**  You will go to a search engine (i.e. Google, Yahoo, etc.) and research two topics:   * The **current population** for each state * The **current number of elected representatives** for each state   (To save time you only have to find the population and number of elected representatives for 15 states. If you find the data for more states, your predictions will be more accurate.) | C:\Users\Math\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\PVGMC1YT\MC900174377[1].wmf |

**Writing about the Results**

1. Explain the two variables you are comparing. What did you type into the search bar to get your results? Cite the websites you used.
2. Make a table of the data points that you collected.
3. Create a scatter plot on a piece of graph paper or using technology. Draw the regression line on the scatterplot.
4. Describe the correlation.
5. Write the equation of the regression line.

Predict *y,* given *x*

1. Choose a value for your *x*-variable.
2. Use your equation to calculate the approximate number of elected representatives (*y*) for the value of *x* you chose above.
3. Describe your prediction in a sentence.

Predict *x,* given *y*

1. Choose a value for your *y*-variable.
2. Use your equation to calculate the approximate population of a state (*x*) for the value of *y* you chose above.
3. Describe your prediction in a sentence.
4. Write a paragraph explaining what you learned about the relationship between your variables and how this knowledge could be useful to someone.