

There will be no test for Chapter 6. Instead you will complete a project. You will collect data, plot it, find the equation, residuals, and report a summary on your data. The requirements are below. Over the course of the coming weeks you will have due dates for items on the *Requirements* list. First you need to decide what you will be collecting data on. Choose from the list below:

1. Ages of couples at Marriage. (Collect data yourself) – Find 10 couples and record the age of each person when they were married.	2. Population of a State vs. The number of Prisoners in the state. (Online Research required)
3. Height and Length of Arm Span (from middle finger tip to middle finger tip). (Collect Data yourself)	4. Population of a State vs. Median Household Income. (Online Research Required)
5. Speed and Stopping Distance (Online Research Required) – Research online what the stopping distance would be if a car were travelling at a specific speed. You need to record 10 different speeds.	6. Year and Federal Hourly Minimum Wage. (Online Research Required) Find data on 10 different years in recent history and what the federal hourly minimum wage was that year.
7. Height and time you can hold your breath. (Collect data yourself)	8. Temperature and WindChill (Online Research Required)
9. Saturated Fat (g) vs Total Fat (g) of different Fast Food Burgers OR Breakfast Sandwiches (Collect data yourself) –This data may be online.	

Requirements

1. You must collect 10 data points MINIMUM. You must document your sources for the data. If you recorded data on 10 people, then you must include their names on a Reference page. If you find your data on a website you must include your website in your data report. **(Due Tuesday, Feb 25)**
2. You must create a scatterplot on graph paper with appropriately scaled and labeled axes. Use a scale that spreads out your data points nicely. **(Due Wed, Feb 26)**
3. With a ruler, draw in a line of best fit. Find the equation of the line. Interpret the slope and the y intercept. **(Due Wed, Feb 26)**
4. Find residuals for each data point compared with your line of best fit. **(Due Thurs., Feb 27)**
5. Using different colors draw in the Upper and Lower bounds on your scatterplot. **(Due Thurs, Feb 27)**
6. Create an excel table and graph of your data and calculate the regression line and correlation coefficient. We will be using a website and Excel in class to do this. Print out a copy of the table and graph properly labeled. **(Done in Class: TBA)**
7. How does your line of best fit (hand drawn) compare with the Excel Regression Line? **(Done in Class: TBA)**
8. Write a summary. Your summary MUST mention all of the following: **(Due Friday, Feb 28)**
 - a) The association, form, strength and any visible outliers. If you determine there are outliers, you must state why it is an outlier and should not be considered in the data analysis.
 - b) Interpretation of the slope and y intercept of your Line of Best Fit.
 - c) Discuss your upper and lower bounds. What information related to your data does this tell us?