Homework 3.

Problem #1

For the *fl_crime.csv* data, proceed to:

1. Plot the *crime* against *education*. Comment on what you observe. Can this relationship be reasonably described by a straight line?
2. Report the correlation between *crime* and *education*. Explain (just mathematically, not sociologically) why you think that the correlation has this particular value, judging by your plot from part 1.
3. Proceed to fit a *crime ~ education* linear regression, and

   a. Write down the fitted equation.
   b. Interpret the intercept. Does it make sense? Why?
   c. Interpret the slope.

Problem #2

Broadband.csv contains data on each country's GDP (measured in billions USD) and the number of broadband subscribers. Proceed to

1. Plot the # of broadband subscribers against GDP and calculate the correlation between these two variables. Describe the relationship.
2. Fit a linear regression for the # of broadband subscribers onto GDP, and

   a. Write down the fitted equation.
   b. Interpret the intercept. Does it make sense? Should we trust it? Why?
   c. Interpret the slope.

Problem #3

3.14, 3.16, 3.26, 3.70, 3.83