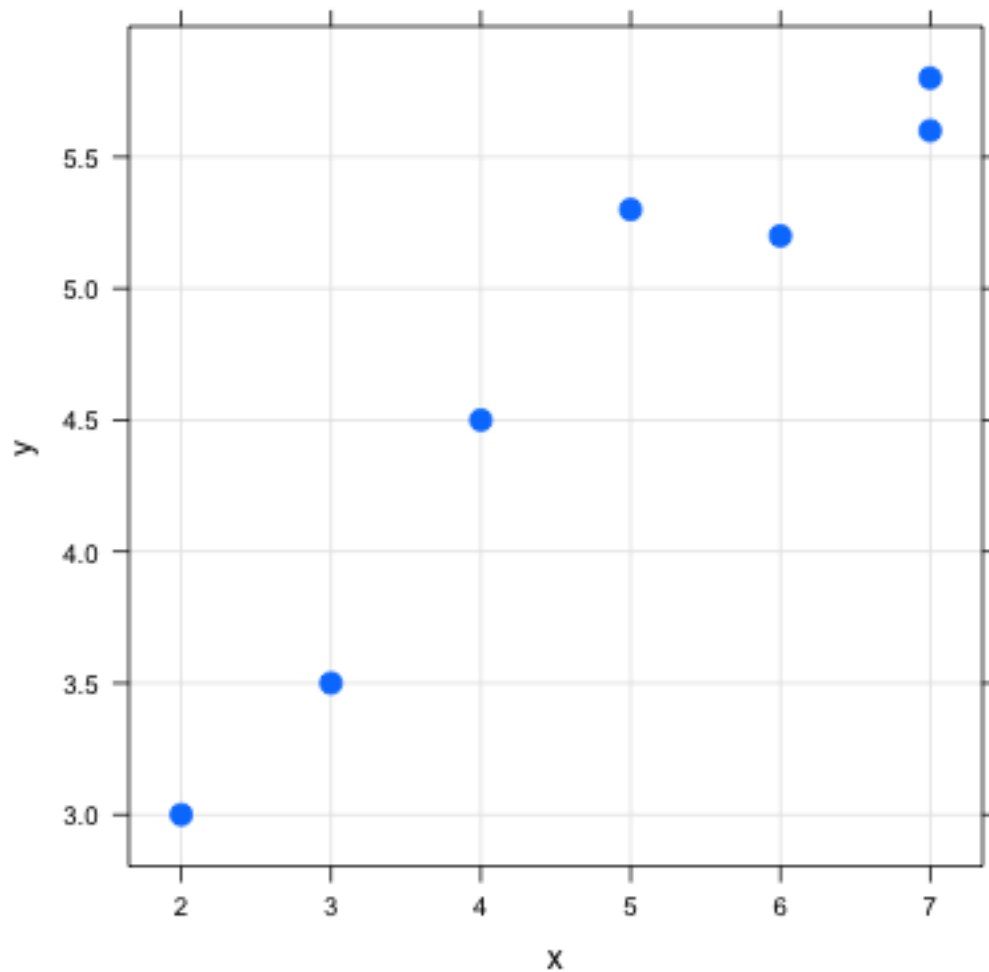


Applied Statistics HW 8

1. Last time we considered the following data

x	2	3	4	5	6	7	7
y	3	3.5	4.5	5.3	5.2	5.8	5.6

Here is a scatterplot of these two variables:



The basic parameters are given in the following table:

\bar{x}	\bar{y}	s_x	s_y	r
4.857	4.7	1.952	1.08	0.964

- Compute the equation for the least square regression line, and draw it on the graph.
- Compute the residuals and the overall error the line is making (the sum of squared residuals).

c. Draw the residual plot.

d. What percent of the variance of y is explained by this regression line? (remember, r^2 measures that)

- e. Peter wants to use the line $y = 2 + 0.5x$ instead, because it is easier to work with. Compute the sum of squared residuals for Peter's line. How is he doing?