

5/20/15

## 11.7 Day 1 Correlation & Linear Regression

Correlation  $\rightarrow$  how well 2 variables relate.

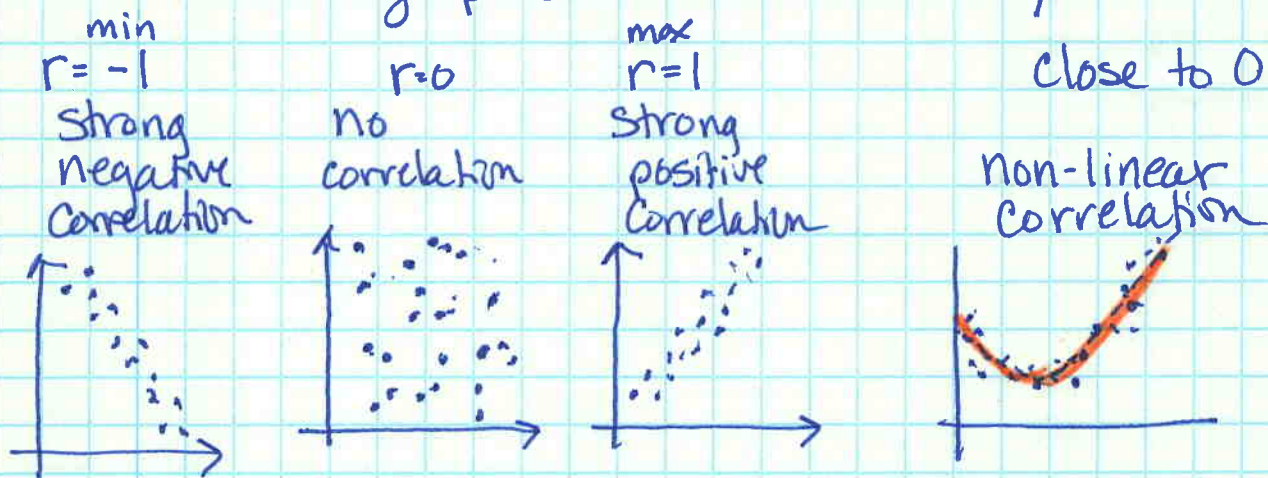
$(x, y) \rightarrow$  (explanatory, response)  
independent, dependent

Linear Regression  $\rightarrow$  how linear the scatterplot of the data is.

Correlation Coefficient  $\rightarrow r$

$$r = \frac{\sum z_x \cdot z_y}{n-1} = \frac{1}{n-1} \sum \left( \frac{x-\bar{x}}{s_x} \right) \left( \frac{y-\bar{y}}{s_y} \right)$$

average product of  $z_x$  and  $z_y$



HW 720 1, 3, 4, 6

look ommy website  
for alternate directions