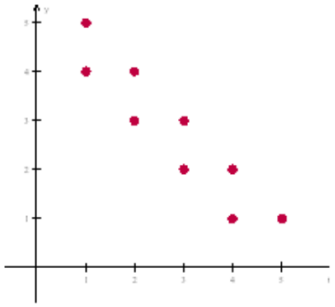
Lesson 6: Interpreting Correlation

Warm-Up:

In pairs on the grid side of a whiteboard, create a scatter plot and line of best fit for the following:

(1, 5), (1, 4), (2, 4), (2, 3), (3, 3), (3, 2), (4, 2), (4, 1), (5, 1)

Definitions:



Positive Correlation: as x-values increase, y-values increase, too

Negative Correlation: as x-values increase, y-values decrease

No Correlation: as x-values increase, y-values neither increase or decrease

Examples:

1. Label each of the following with the type of correlation:

A

_____

B

_____

C

_____

D

_____

2. Choose one scatter plot above and label the axes with variables that match the shape of the graph.

Correlation Value

Correlation values range from -1 to 1:

-1: the closer a scatter plot is to a line sloping down to the right, the closer its correlation value is to -1

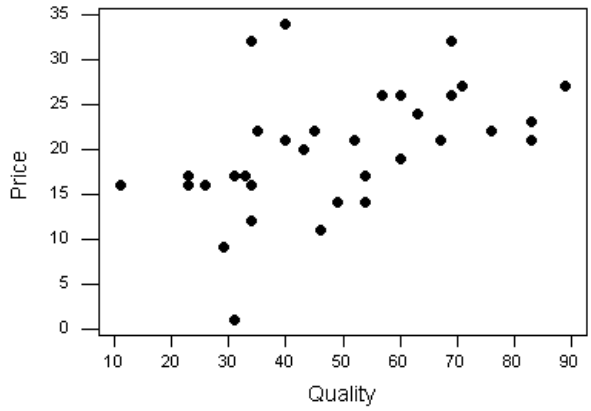
1: the closer a scatter plot is to a line slopping up to the right, the closer its correlation is to 1

0: a scatter plot with no correlation has a value close to 0

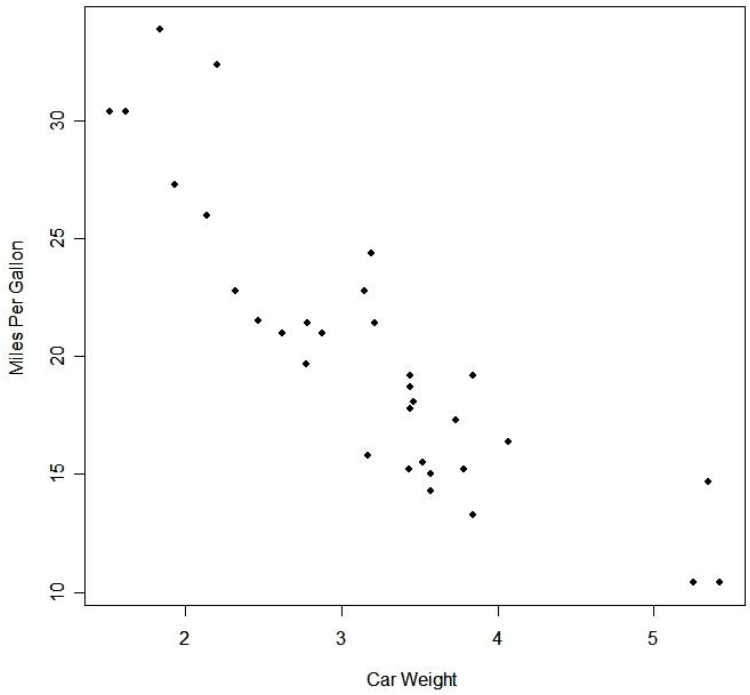
Strong and Weak Correlation

Describe the correlation in each scatter plot below – whether it is positive, negative, neither and what strength it has.

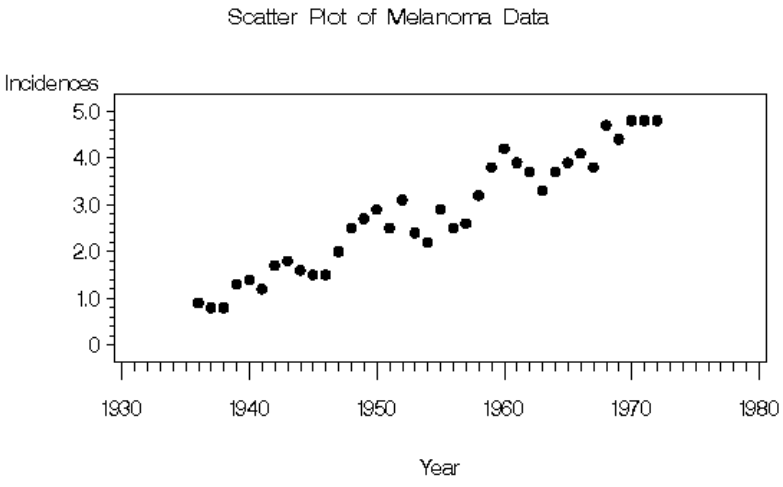
A



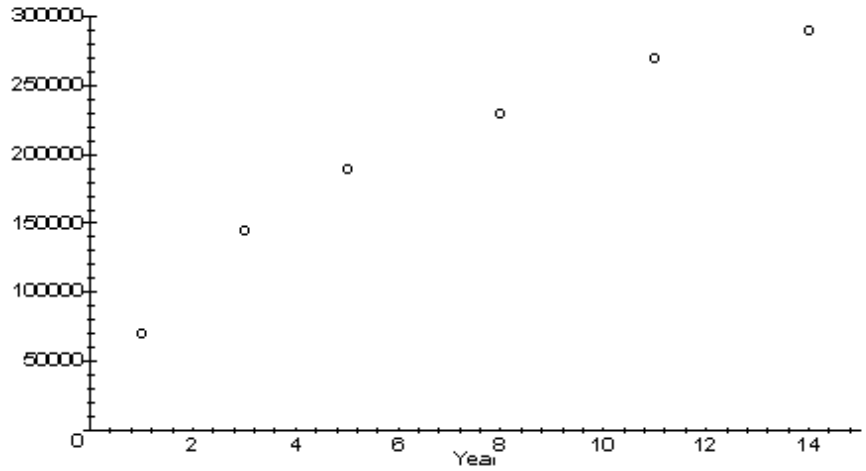
B



C



D



Homework: p.75-76 #1, 3-7, 11, 12