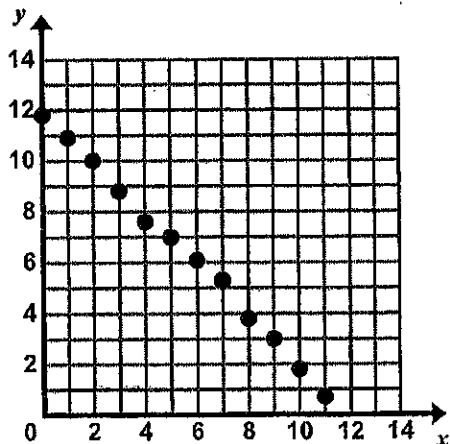


(Day 1) 4.4A-Trendlines

Name _____ Date _____ Period _____

Directions: In #1 and 2, observe the data sets and take note of any associations you see, draw a line of best fit, write a prediction function, and use your function to predict the value of y when $x = 12$ and when $x = 100$.

1.



a. Observations:

b. Using a ruler, draw a line of best fit through the data points that captures the general trend of the data.

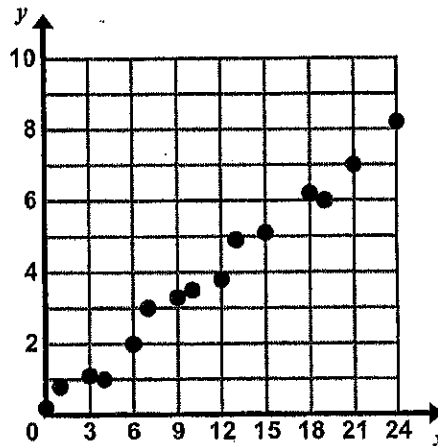
c. Estimate the slope and y -intercept of your line.

$m \approx$ _____ $b \approx$ _____

d. Write a prediction function for the data set.

e. Use your prediction function to find the value of y when $x = 12$ and when $x = 100$.

2.



a. Observations:

b. Using a ruler, draw a line of best fit through the data points that captures the general trend of the data.

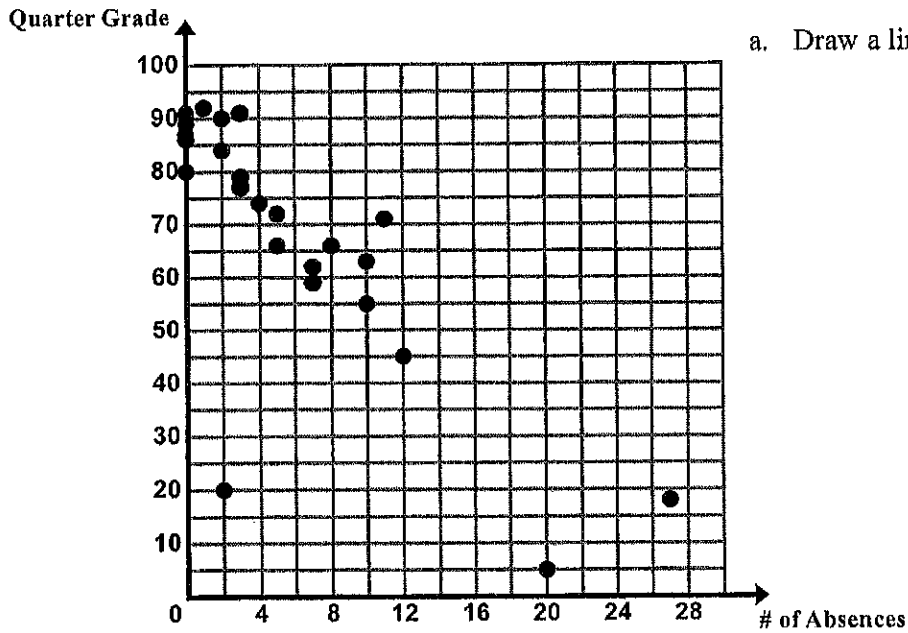
c. Estimate the slope and y -intercept of your line.

$m \approx$ _____ $b \approx$ _____

d. Write a prediction function for the data set.

e. Use your prediction function to find the value of y when $x = 12$ and when $x = 100$.

3. The following scatter plot shows the final quarter grade in Ms. Ganchero's math class for students vs. the number of times they are absent.



a. Draw a line of best fit on the scatter plot.

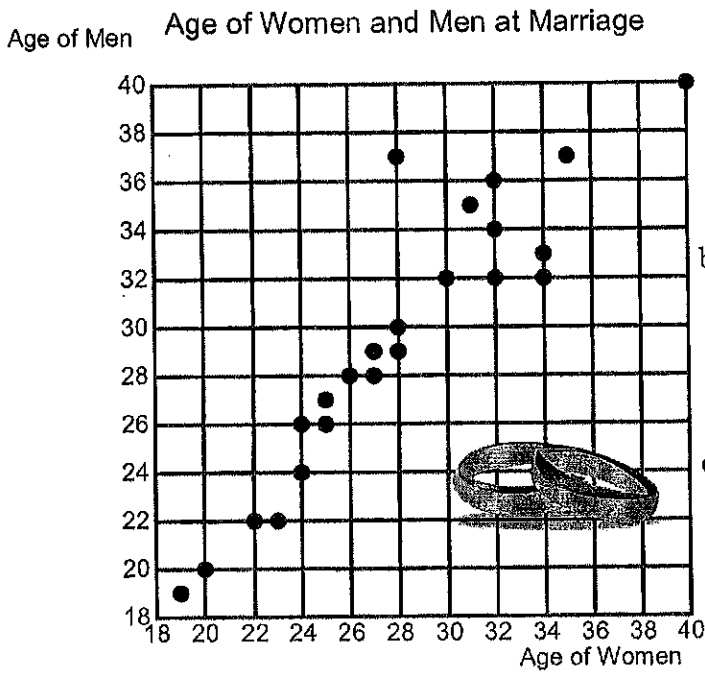
b. Write a prediction function for the line of best fit you drew.

c. Explain the meaning of the slope and y -intercept in the context.

d. Use your prediction function to predict the final grade of a student who is absent 16 times.

e. Use your prediction function to predict how many times a student is absent who receives a final grade of 5 in the class.

4. Bethany is interested in the relationship between the age of when men and women get married. She surveys 24 couples and asks them the age in which they got married for the first time. A scatter plot of her data is below.



a. Describe the association between the two variables. Circle any clusters in the data. Put a star by any points that appear to be outliers.

b. Provide an explanation for any clusters of data or outliers.

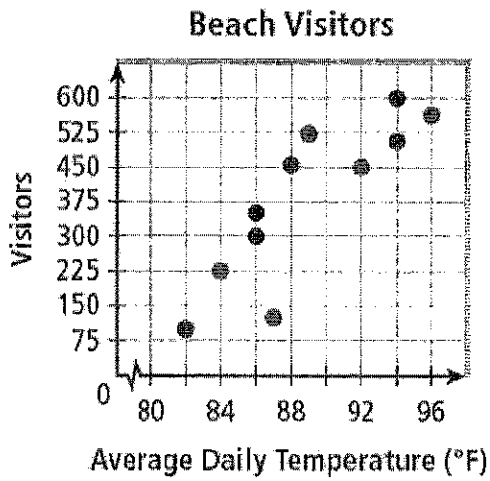
c. Draw a line of best fit on the scatter plot.

d. Write a prediction function for the line of best fit you drew.

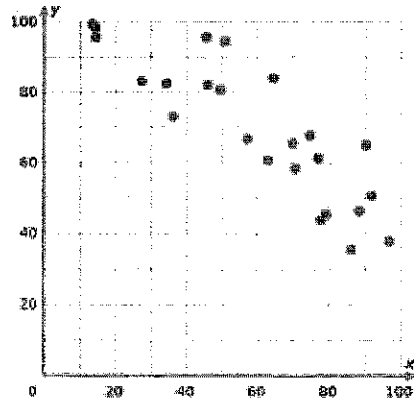
e. Use your prediction function to predict the age of a man when he gets married if the woman that he marries is 38.

Describe the correlation of each scatter plot and scenario.

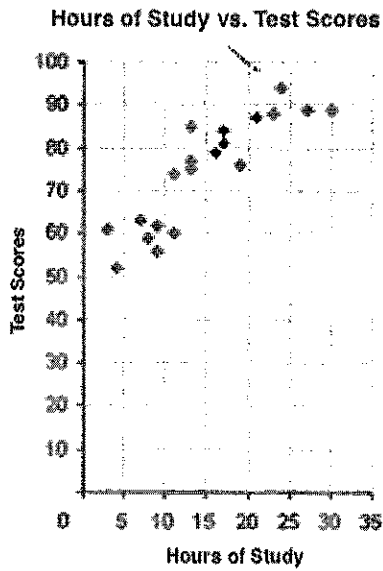
5.



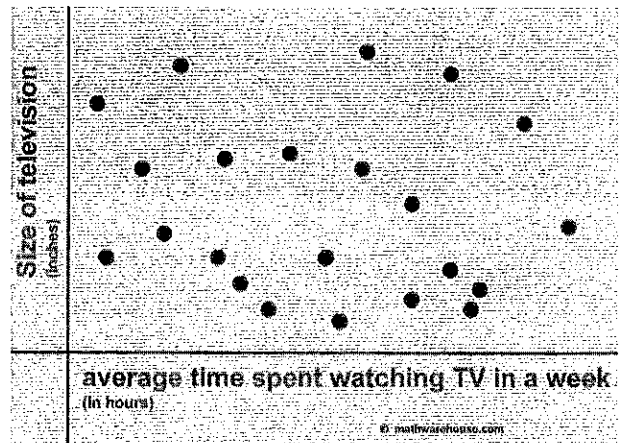
6.



7.



8.



9. Temperature and number of popsicles sold.

10. Number of books read and speeding tickets received.

11. Hours spent watching TV and test scores.

12. Number of times you complain each day and number of friends you have.

13. Hours spent working and money earned.

14. Number of hours spent practicing free throws and free throws made in a game.

15. Hours spent on phone and number of shoes owned.