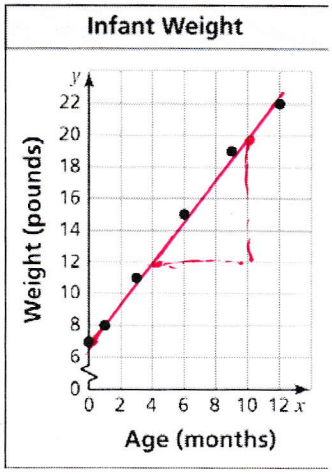
Name: Answers Period: _____

9.2 - Lines of Fit

1) The scatter plot shows the weights y of an infant from birth through x months.



a) At what age did the infant weigh 11 pounds?

3 months

b) What was the infant's weight at birth?

7 pounds

c) Draw a line that you think best approximates the points. (A line of best fit).

d) Write an equation for your line.

example: $y = \frac{4}{3}x + 7$

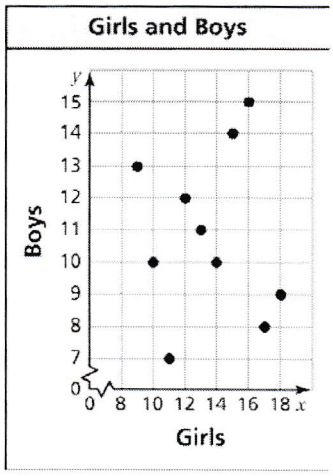
e) Use the equation to predict the weight of the infant at 18 months.

Around 31 pounds

f) Does the data show a *positive*, a *negative*, or *no* relationship?

Positive

2) The scatter plot shows the relationship between the numbers of girls and the numbers of boys in 10 different classrooms.



a) What type of relationship, if any, does the data show?

No relationship

b) Is it possible to find the line of fit for the data? Explain.

No. There is no line that could be drawn to show a trend in the data.

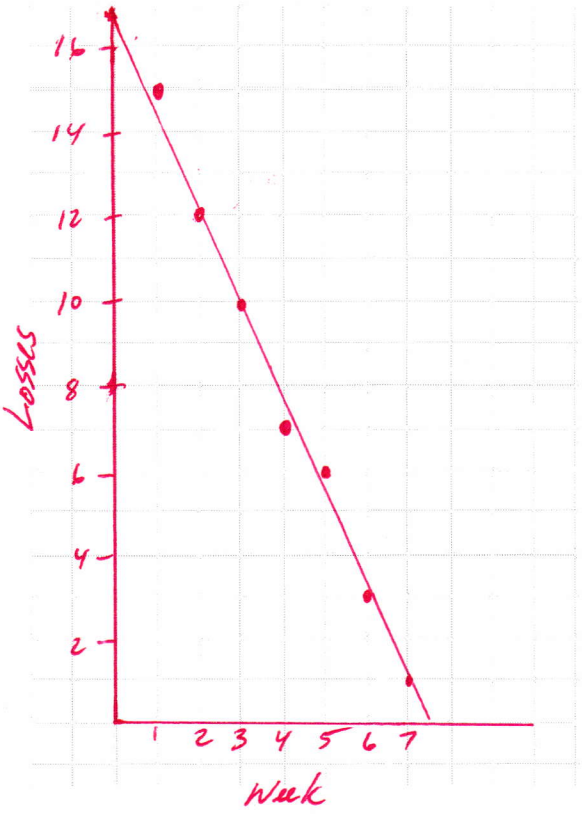
c) Is it reasonable to use this scatter plot to predict the number of boys in the classroom based on the number of girls? Explain.

No there is no relationship to help make a prediction.

3) The table shows the numbers of losses y a gamer has x weeks after getting a new video game.

Week, x	1	2	3	4	5	6	7
Losses, y	15	12	10	7	6	3	1

a) Make a scatter plot of the data.



b) Draw a line of fit.

c) Write an equation of the line of fit.

Example: $y = -2x + 17$

d) Does the data show a positive, a negative, or no relationship?

Negative

e) Interpret the relationship. What does the relationship mean?

there are fewer losses each week.