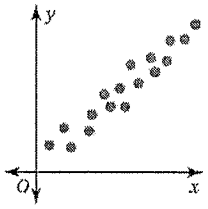
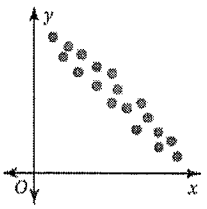
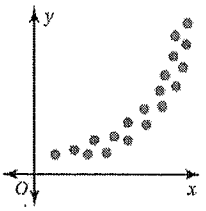
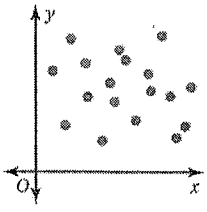
Name: KEY '15 Period: _____

9.1 Analyzing and Sketching Graphs

Key Terms and Concepts!!

Positive Linear Relationship	*Negative Linear Relationship*	*Nonlinear Relationship*	*No Relationship*
			
The points lie close to a line. As x increases, y increases.	The points lie close to a line. As x increases, y decreases.	The points lie in the shape of a curve.	The points show no pattern.

Describe the relationship you would expect between the data. Explain.

1) age of the automobile and the odometer reading

Positive relationship because as age of the car increases, so does the odometer. If the age of the car is low, so is the odometer.

2) time spent fishing and the amount of bait in the bucket

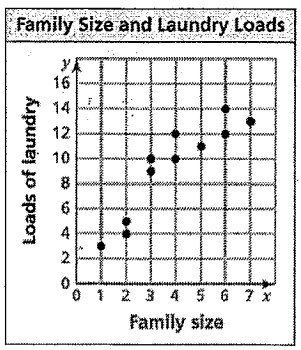
Negative relationship because the longer you fish the less bait you have in the bucket.

3) number of passengers in a car and the number of traffic lights on the route

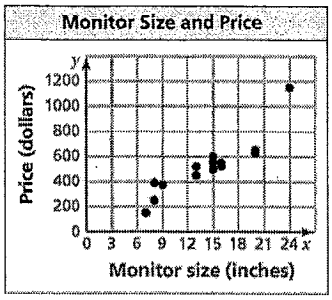
No relationship because the two have nothing to do with each other

Describe the relationship between the data. Identify any outliers, gaps, or clusters.

4)



Positive linear relationship because the data goes up from left to right which means as x increases, so does y. No outliers and most of the data is clustered at x values 3 thru 7.

5) 

Positive linear relationship because as x increases, so does y values. Outlier is at (24, 1150) and most data is clustered between a monitor size of 6-20 inches.

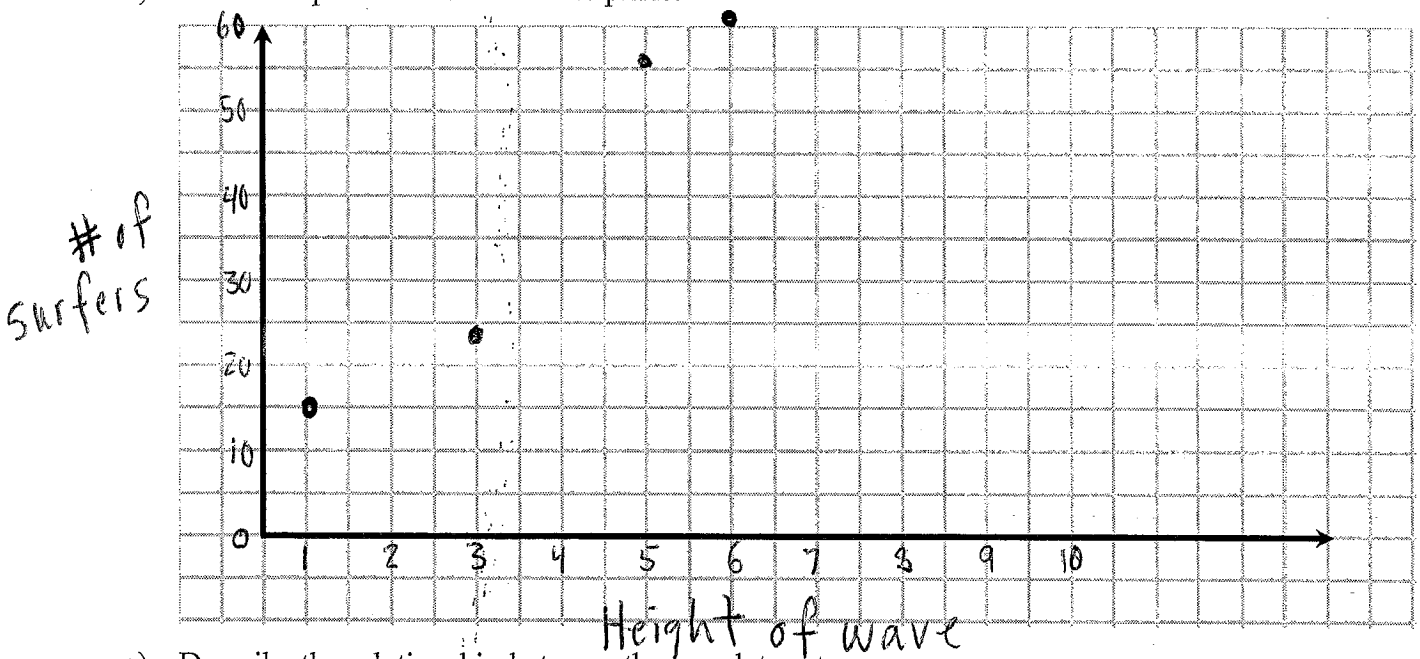
6) The table shows the heights (in feet) of the waves at a beach and the numbers of surfers at the beach.

Wave Height	3	6	5	1
Number of Surfers	24	61	56	15

a) Write the ordered pairs from the table

(3, 24), (6, 61), (5, 56), (1, 15)

b) Plot these points on a coordinate plane.



c) Describe the relationship between the two data sets.

Positive linear relationship

7) The scatter plot shows the numbers of lawns mowed by a local lawn care business during one week.

a) How many days does it take to mow 30 lawns?

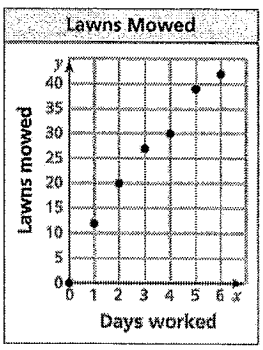
4 days.

b) About how many lawns can be mowed in 1 day?

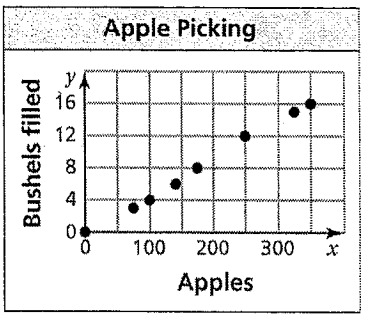
11 or 12 lawns.

c) Describe the relationship shown by the data.

Positive linear relationship.



8) The scatter plot shows the numbers of bushels filled and the numbers of apples picked.



a) How many bushels are needed for 350 apples?

16 bushels

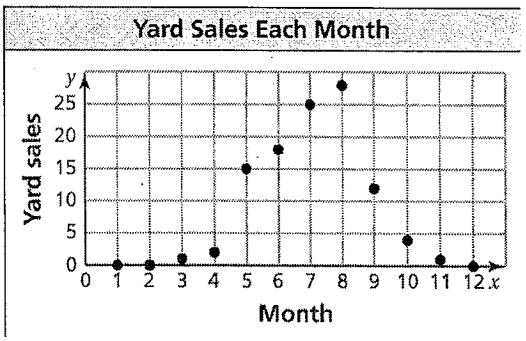
b) About how many apples can be placed in 8 bushels?

about 175 apples

c) Describe the relationship shown by the data.

Positive linear relationship

9) The scatter plot shows the numbers of yard sales in your neighborhood each month for a year.



a) How many yard sales are during the month of February? June?

Feb → 0 yard sales

June → about 17, 18, or 19 yard sales.

b) During which month(s) are there no yard sales?

Jan, Feb, and Dec.

c) What type of relationship do the data show?

Positive linear relationship between months 1-4 and again for months 5-8 and a neg. non linear relationship between months 9-12.

d) What type of climate might this neighborhood have?

Very cold during the winter months and nice weather during spring and summer.

e) Identify any outliers, gaps, or clusters and explain why they might exist.

- No real outliers
- There is a gap between April and May probably because that's when weather starts getting nice.
- Also a gap between August and September probably because the weather is starting to not be nice.