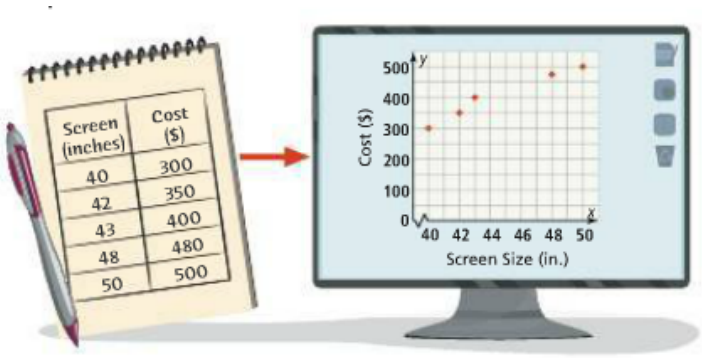
Algebra 1 Name _____

3-5 Scatter Plots & Lines of Fit Date _____ **A#1-2**

Goal: To use a scatter plot to describe the relationship between two data sets

I. Warm Up: Nicholas plotted data points to represent the relationship between screen size and cost of television sets. Everything about the televisions is the same, except for the screen size.

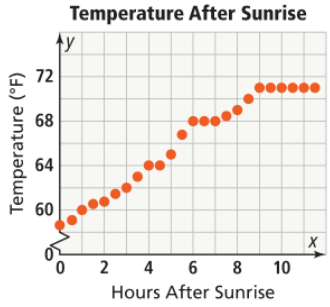
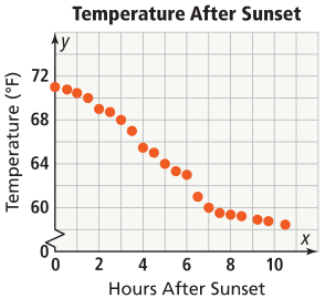
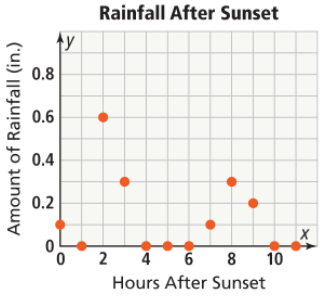
a. Describe any patterns you see.



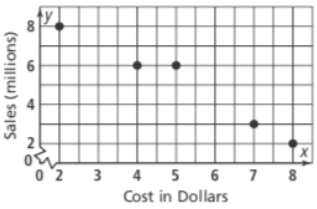
b. What can you say about the cost of a TV as the screen size gets larger?

c. How much do you think a 46" TV would cost? Where would the point for a 60" TV be on the graph? Explain both.

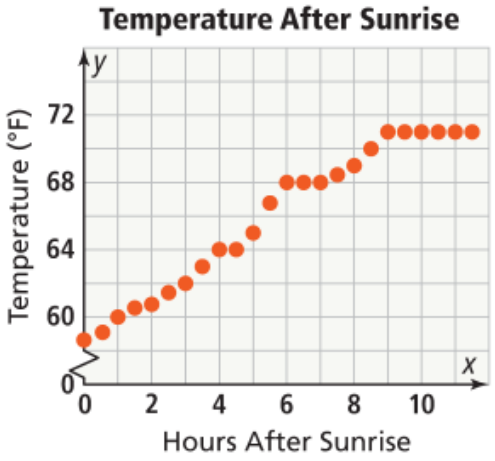
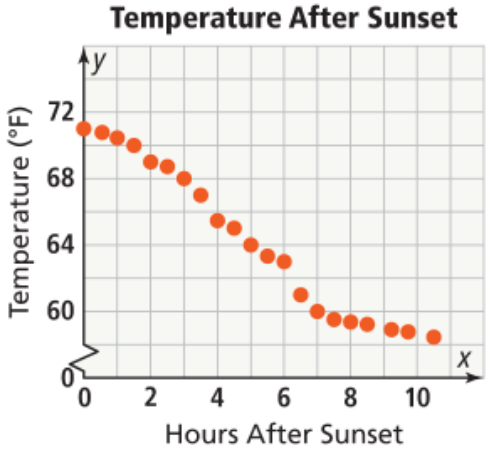
II. Understanding Association: Consider the following graphs. What can be said about the independent variable, *x*, and the dependent variable, *y*?

_____ Association	_____ Association	_____ Association
 Description:	 Description:	 Description:

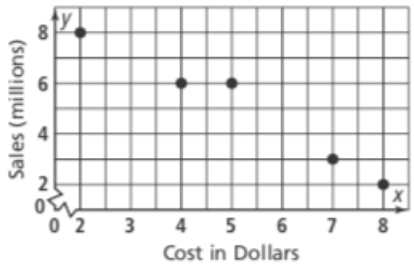
Try It! Describe type of association the data have in the graph to the right.



III. Understanding Correlation and Trend Lines: Association is a _____ of generalization. If the association seems to be _____, then we use the term _____. A line that can be drawn among the data is called a _____.

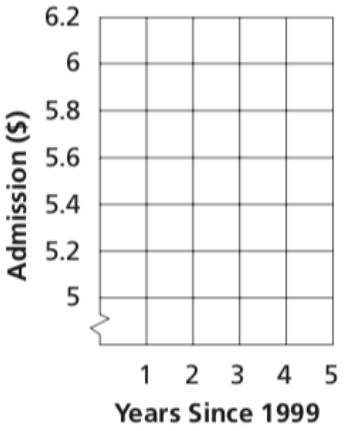
Positive Correlation	Negative Correlation
	
	Steps to Find Equation of <u>Trend Line:</u> **1.** Draw line among data **2.** Choose any two pts on LINE **3.** Find equation in m-int form
Interpretation:	Interpretation:

Try It! Find the equation of a trend line in slope-intercept form of the data to the right. Then interpret.



IV. Using Trend Lines: The data below shows the average cost of a movie ticket since 1999. Graph the data and find the equation of a trend line. Use the equation to predict the cost of a movie ticket in 2019. How does this compare with your experience?

Years Since 1999	Admission (dollars)
0	$5.08
1	$5.39
2	$5.66
3	$5.81
4	$6.03

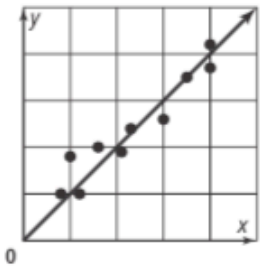
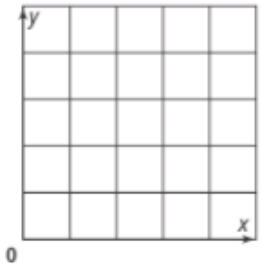
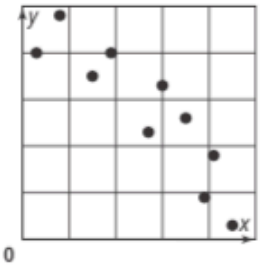


Algebra 1

3-5 Scatter Plots & Lines of Fit **A#1-2**

Vocabulary Summary

Complete the vocabulary chart by filling in the missing information.

Word or Word Phrase	Definition	Picture or Example
trend line	A line that models the data in a scatter plot by showing the general direction of the data	
positive correlation	When *y* tends to increase as *x* increases in a set of data	1. 
negative correlation	2.	
no correlation	When there is no relationship between the *x*- and *y*-values in a set of data	3.