Name_____ Pd_____ Date_____ **Section 2.E.8**

**Writing Linear Equations from Scatterplots**

Week	*Empire* Season 1 - Episode Titles	Number of Viewers
1	Pilot	9,900,000
2	The Outspoken King	10,320,000
3	The Devil Quotes Scripture	11,070,000
4	False Imposition	11,360,000
5	Dangerous Bonds	11,470,000
6	Out, Damned Spot	11,960,000
7	Our Dancing Days	13,020,000
8	The Lyon's Roar	13,900,000
9	Unto the Breach	14,330,000
10	"Sins of the Father	14,900,000
11	Die But Once	15,820,000
12	Who I Am	17,620,000

Empire Viewers Each Week
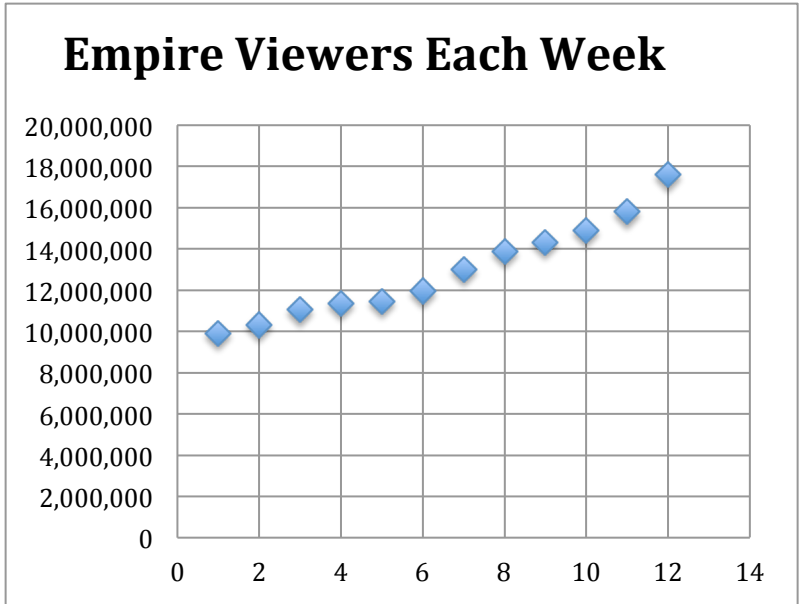
Scatterplots are _____

by _____.

Even though a lot of data from real life does not EXACTLY follow a specific pattern, you can often see a

_____. A _____ is a line on a scatterplot that models this
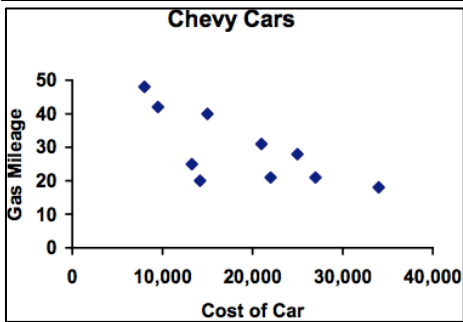
correlation. It should have _____.
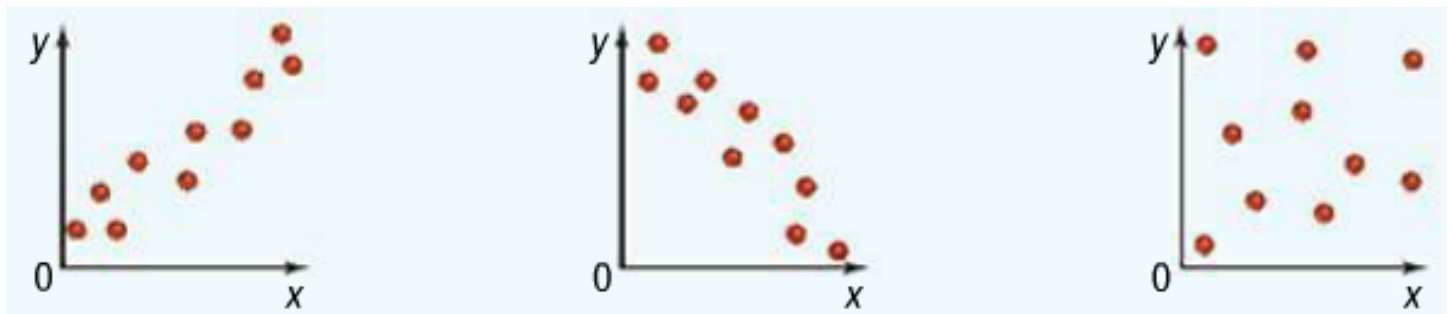
(1) Describe the correlation for the Empire viewer data.

(2) If you drew a trend line to model the Empire viewer data, what kind of slope would it have?

(3) What does this correlation actually *mean*? Write a complete sentence.

If we can draw a trend line on a scatterplot, we can write a linear equation to **model** the data.
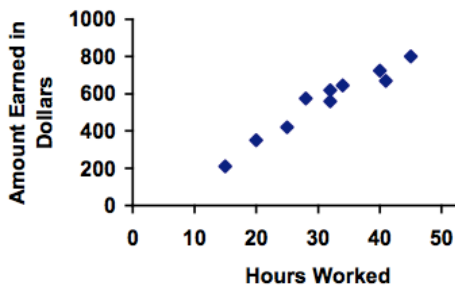
Chevy Cars

Steps

1) Sketch trendline - same number of points above and below.

2) Choose two points **on the line** and calculate slope.

3) Use one point and the slope to write in point-slope form.

4) Solve for y to write in slope-intercept form.

Does the slope we have make sense? Why?

Does the y-intercept we have make sense? Why?

Ex. 2

Draw and write a linear equation for the trend line of the data.

Does the slope make sense? Does the y-intercept make sense? Why?