Journal Entry:

1. Read through the Getting Ready problem at the top of pg. 92. Answer the question and explain why you said the answer you did.

2. Did you earn the same amount of money each day? Explain.

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Section 2-5
Using Linear Models

Students will be able to:
   -write linear equations that model real-world data
   -make predictions from linear models

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Graphs of real-world data rarely fall into a perfect line. Their arrangement can suggest a relationship that can be modeled with a linear equation.

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Define:
Scatter Plot: represents data points
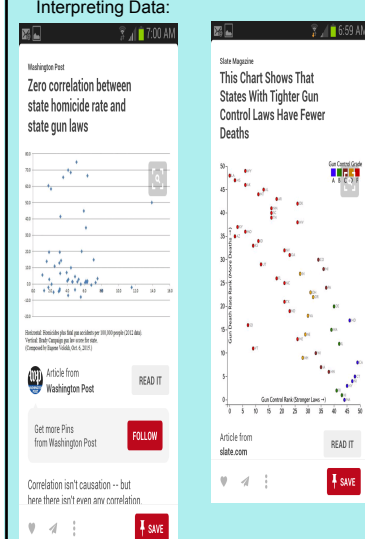
Correlation:

pos   neg   Zero/no

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What type of correlation?

-shoe size to IQ

-size of TV to weekly time spent watching

-computer sharing in schools over time

-size of computer over time

-average temp throughout year and activity

-height and sports participation

-number of missed days and test scores

Sep 23-11:05 AM

Interpreting Data:

Sep 23-10:20 AM

Utilities Bill From Northwestern Energy:

Month	1	2	3	4	5	6	7	8	9	10	11	12
Bill ($)	245	231	199	125	73	24	12	13	22	35	128	200

Form a scatter plot from the data.
Describe the correlation.
What conclusion can you draw?

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A trend line approximates the relationship between the variables or data sets.
   -helps make predictions

$$m = \frac{y - y_1}{x - x_1}$$

$$y - y_1 = m(x - x_1)$$

(x, y)

(x_1, y_1)
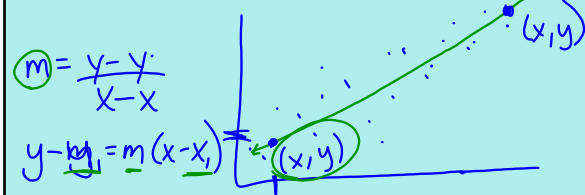
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A trend line that gives the most accurate model of related data is the line of best fit.

The correlation coefficient, r, indicates the strength of the correlation. The closer r is to -1 or 1, the more closely the data resembles the line (more accurate).

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The table lists the percent of persons 25 years or older with at least a Bachelor's degree and the median household income for 12 states in 2000.

Make a scatter plot and describe the correlation. What conclusion can you draw from this data?

The median for SD in 2000 was $36,172, so what do you think the percent of persons with a minimum of a Bachelor's degree would be?

State	Adults With at Least BS/BA	Income
AK	25%	$52,000
AL	19%	$34,000
CA	27%	$47,000
FL	22%	$39,000
MS	17%	$31,000
MT	24%	$33,000
ND	22%	$35,000
NY	27%	$43,000
NV	18%	$45,000
TX	23%	$40,00
WA	28%	$46,000
WV	15%	$30,000

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Hwk: pg. 96 - 98
#10, 14 - 18 all,
20 - 23 all

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