

NAME: _____

Math _____, Period _____

Mr. Rogove

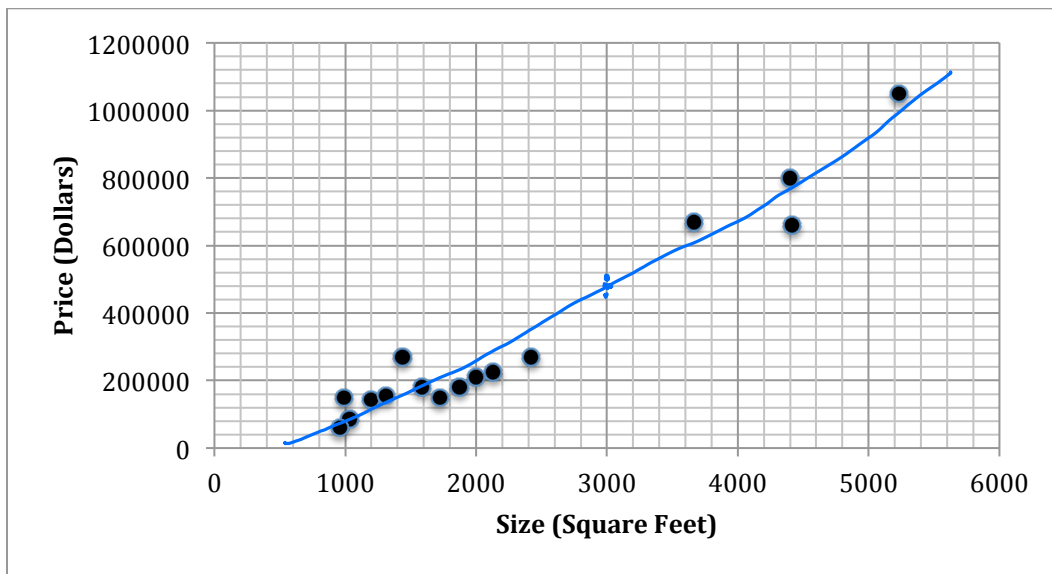
Date: _____

LEARNING OBJECTIVE: We will informally fit a straight line to data displayed in a scatter plot. (G8M6L5)

CONCEPT DEVELOPMENT:

This is data of home prices in Milwaukee in 2013:

Size (sq ft)	Price (\$)	Size (sq ft)	Price (\$)
5,232	1,050,000	1,196	144,900
1,875	179,900	1,719	149,900
1,031	84,900	956	59,900
1,437	269,900	991	149,900
4,400	799,900	1,312	154,900
2,000	209,900	4,417	659,999
2,132	224,900	3,664	669,000
1,591	179,900	2,421	269,900



Is there a linear relationship? *Yes!*

How much money would a 3000 square foot house cost? What would help us make a better prediction?

\$480k, \$500k, Straight line

How should we fit the line to best make predictions?

Draw a line that is close to as many points as possible.

GUIDED PRACTICE:**Steps For Informally Fitting Lines to Data in Scatterplots**

1. Study the data and the scatter plot. Verify that a linear relationship exists.
2. State the relationship in terms of the problem.
3. Use your best judgment to get a straight line as close to as many points as possible.

Does the current in the water go faster or slower in shallow water? The data below show the depth and speed at various locations on the Columbia River.

Depth (Feet)	Velocity (feet/second)
0.7	1.55
2.0	1.11
2.6	1.42
3.3	1.39
4.6	1.39
5.9	1.14
7.3	0.91
8.6	0.59
9.9	0.59
10.6	0.41
11.2	0.22

Describe the relationship between the depth and the velocity.

The deeper the water, the slower it is.

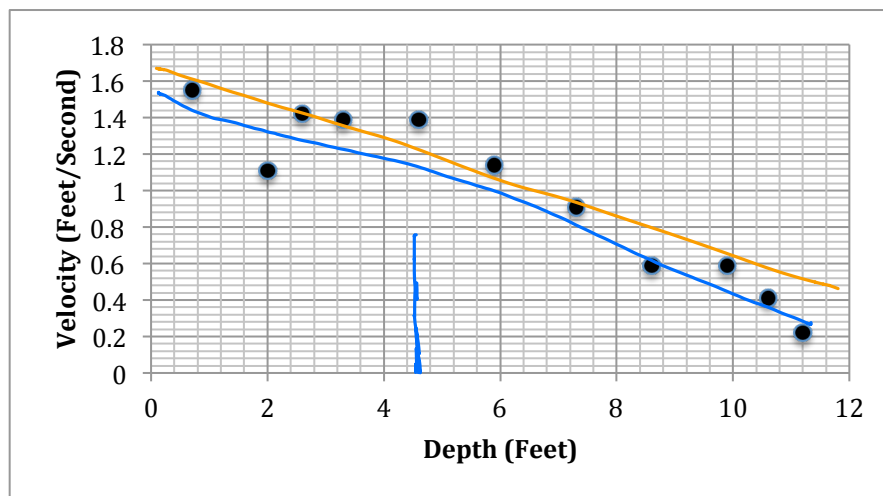
Negative relationship, linear

At 2 feet deep, what would you expect the speed of the river to be?

Even though there was an observation of 1.11, it might be closer to 1.4-1.5 fps

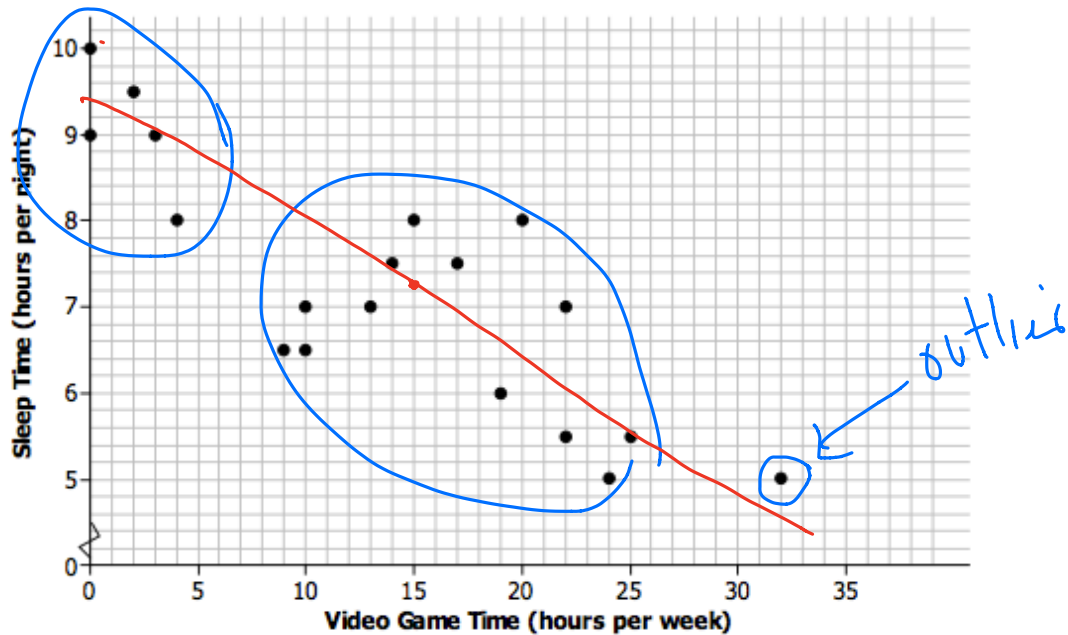
Draw a line and predict how fast the river might be moving at a depth of 4.6 feet.

1.18-1.2 fps



Video Game Time v. Sleep Time. This scatterplot below shows the data collected from a survey of 8th graders asking about the video game habits and sleep habits.

Mean Hours Sleep per Night vs. Mean Hours Playing Video Games per Week



What trend do you see in the data?

Yes! The more you game, the less you sleep

Are there any outliers in this data? Any clusters that you notice?

Draw a line that might fit the data. ✓

Can you make a prediction about how sleep someone who played 15 hours of video games per night might get?

About 7 hrs.

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INDEPENDENT PRACTICE:

Students will complete the wins v. sports activity

ACTIVATING PRIOR KNOWLEDGE:

CLOSURE:

TEACHER NOTES:

Map to Lesson 8, Mod 6. Do Sports teams and wins or temperature activity.