Grade Level/Course:

Lesson/Unit Plan Name:

Rationale/Lesson Abstract:

Timeframe:

Common Core Standard(s):

Example 1: Look at the two scatterplots and answer the questions below.



Choral response for questions a) and b) below, but make sure to follow up the response by asking a random student for their reasoning (why?) regardless if they are right or wrong. With your guidance, this should help dear up any misconceptions

Scatterplot B has a negative correlation since one value increases as the other value decreases.

Scatterplot A appears to have a stronger linear relationship since the points appear to be more linear.

For question c) have some students share their predictions and reasoning, then reveal the actual correlations.

Scatterplot A: r = 0.84Scatterplot B: r = 0.51

You Try:

0.95

r

The scatterplot has a negative association. As one variable increases the other decreases.

appears to have a stronger linear relationship since the points appear to be more linear.

b) Draw a scatterplot that may represent a correlation of r = 0.95.

ph shows a negative association and shows a strong linear relationship. Then display their scatterplot under the document camera. (Example 2 has a correlation of -0.95 which you can use to help you transition to example 2).

Example 2: Fit a linear model for the scatterplot and write the equation of the linear model.

<u>You Try</u>: The following scatterplot displays the hours playing video games per week and the G.P.A. of 33 students. Answer the following questions regarding the scatterplot.







v	0.089x 4		
2	0.000.10		Based on this linear model, we would expect the
У	y 0.089 10 4	4	student's G.P.A. to be 3.11.

y 3.11

Using Excel to Display a Scatter Plot:





Using Excel to Find correlation:







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Using Excel to Find the Line of Best Fit:













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y 0.670*x* 3.816

Example 2: Find the correlation of the data below. Then compare the result with your estimation from the first example.

	A	В
1	3	7
2	2	6
3	10	11
4	6	10
5	8	7
6	7	7
7	7	9
8	7	10
9	4	4
10	4	7
11	1	4
12	1	4
13		

You Try: Find the correlation of DATA SET A and B. Then compare the result with your estimations from the previous you try's.

Example 3: Find the line of best fit for the data below. Does the line of best fit look reasonable based on your scatter plot from example 1.

	А	В
1	3	7
2	2	6
3	10	11
4	6	10
5	8	7
6	7	7
7	7	9
8	7	10
9	4	4
10	4	7
11	1	4
12	1	4
13		

You Try: Find the line of best fit for the DATA SET A and B. Does the line of best fit look reasonable based on the scatter plots from the first you try's.

Think Pair Share: What advantages does technology give us when given a bivariate data set?

Efficiency Accuracy Organization



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Scatterplots: Note-Taking Guide (Day 1)

Scatter Plot:





Example 1: Look at the two scatterplots and answer the questions below.



Scatterplots: Note-Taking Guide (Day 1)

Example 3: The following scatterplot displays the days present at school and the G.P.A. of 50 students. Answer the following questions regarding the scatterplot.



Scatterplots: Note-Taking Guide (Day 2)

Example 1: Input the data below and display it on a scatter plot. Then estimate the correlation.

	A	В
1	3	7
2	2	6
3	10	11
4	6	10
5	8	7
6	7	7
7	7	9
8	7	10
9	4	4
10	4	7
11	1	4
12	1	4
13		

You Try: Input the data below and display it on a scatter plot. Then estimate the correlation.





Example 2: Find the correlation of the data in example 1. Then compare the result with your estimation from the first example.

<u>You Try</u>: Find the correlation of DATA SET A and B. Then compare the result with your estimations from the previous you try's.

r _____

r _____

Example 3: Find the line of best fit for the data from example 1. Does the line of best fit look reasonable based on the scatter plot.

m _____ *b* _____

You Try: Find the line of best fit for the DATA SET A and B. Does the line of best fit look reasonable based on the scatter plots from the first you try's.

Exit Ticket: Use the data below to answer the following questions.