Correlation vs Causation HW Name:_____

Determine whether the following examples show causation or correlation. Circle the correct answer.

1) Liz notices that there are more people at the grocery store on Wednesday vs Thursday night.

Correlation Causation

2) During the winter months, there are more sweatshirts being sold.

Correlation Causation

3) You lied to your parents and now you are grounded.

Correlation Causation

Put the following correlation coefficients in order from WEAKEST to STRONGEST.

4) -0.98, 0.87, 0.23, -0.54, 0.45

5) 0.65, -0.26, 0.59, -0.82, 0.47

Positive, Negative or No Correlation?

6) The number of miles you walk vs the amount of time you spend walking _____

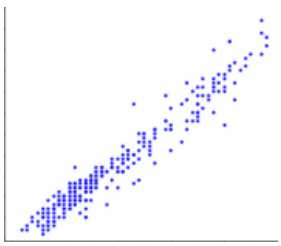
7) The number of days you spend on vacation vs the month that you were born in. _____

8) Your age vs the cost of the insurance for your vehicle _____

9) The number of letters in your first name vs the number of letters in your last name. _____

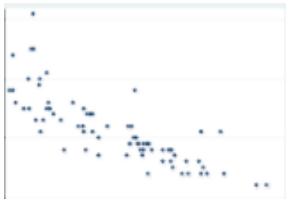
Circle the BEST correlation coefficient given the graph.

10)



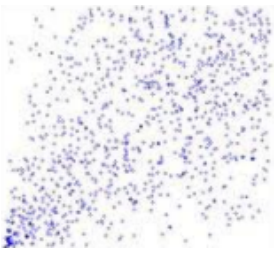
-0.9 -0.5 0 0.6 0.85

11)



-1 -0.7 0 0.23 0.78

12)



-1 -0.5 0 0.5 1

HW #44

Residuals Worksheet

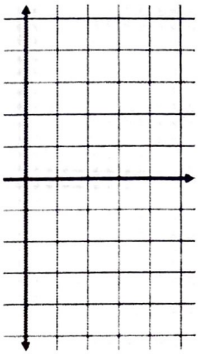
Name_____

Date_____ Period_____

Directions: Complete each table using the given values. A calculator will be very useful. Round answers to one decimal place. Construct the residual plot. Be sure to label the independent and dependent variables, along with the units.

1. Linear Regression equation: y = 0.5x

x	y (Observed Value)	Predicted Value	Residual Value
5	3		
10	4		
15	9		
20	7		
25	13		
30	15		

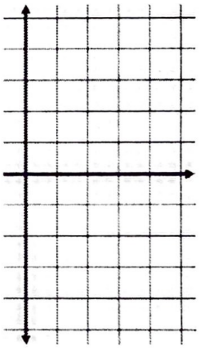


Does the residual plot suggest a linear relationship? Explain.

_____

2. Linear Regression equation: y = -0.4x + 16.3

x	y (Observed Value)	Predicted Value	Residual Value
2	5		
4	15		
6	26		
8	23		
10	11		
12	3		

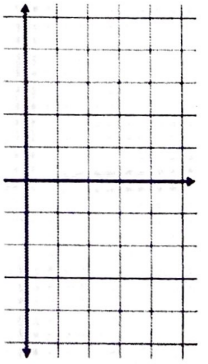


Does the residual plot suggest a linear relationship? Explain.

_____

3. Linear Regression equation: [redacted] y = 4.9x + 16.4

x	y (Observed Value)	Predicted Value	Residual Value
100	505		
90	460		
80	415		
70	360		
60	305		
50	265		



Does the residual plot suggest a linear relationship? Explain.

_____