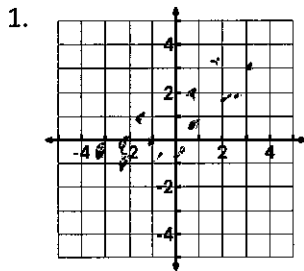
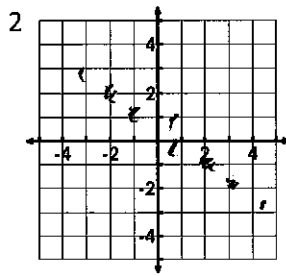


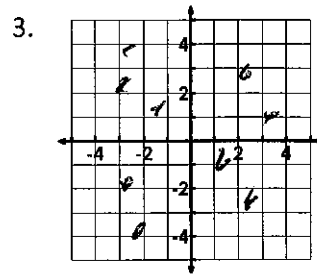
Sketch each of the following:



Positive, weak



negative, strong



no correlation

4. If the correlation coefficient is $r = -0.76$, what can you conclude about the data?

negative, points are fairly evenly spaced

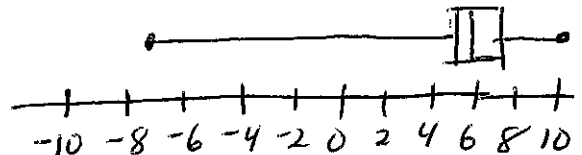
5. What is the line of best fit (linear) for the data provided: The data is the money a waitress made one night

hours worked	1	2	3	4	5	6
Money made	12	18	23	30	36	41

Line of best fit: $y = 5.89x + 6.07$

6. Make a box and whisker plot with the following data:

5, 6, 7, 8, 7, 8, 5, 10, 5, 7
-7, 0, 5, 5, 6, 7, 7, 8, 10
5.5



Are there any outliers? If so, what are the limitations? *2 < x < 10*
5 - 1.5(2) = 2
7 + 1.5(2)

What is the interquartile range? 2

7. What is the Mean Absolute Value of the data above? $11.6 + 4.6 + 1.2 + 1.4 + 4.8 + 3.4 + 5.4$

$\bar{x} = 4.6$

$MAD = \frac{|-7 - 4.6| + |0 - 4.6| + 3|5 - 4.6| + |6 - 4.6| + 2|7 - 4.6| + |8 - 4.6| + |10 - 4.6|}{10}$

$MAD = 2.24$

8. If the exponential regression equation is $y = 121.3(.89)^x$

a) What is the initial value? 121.3

b) What is the rate of decay? .11 c) what is the value of y when x = 3? 85.51

9. A study of graduates' average grades and degrees showed the following results.

Degree	C	B	A	Total
B.S.	5	8	15	28
B.A.	7	12	8	27
Total	12	20	23	55

If a graduate student is selected at random, find these ~~probabilities~~ ^{conditional frequencies}.

- a. The graduate has a B.S. degree, given that he or she has an A average. $15/23$
- b. Given that the graduate has a B.A. Degree, the graduate has a C Average. $7/27$

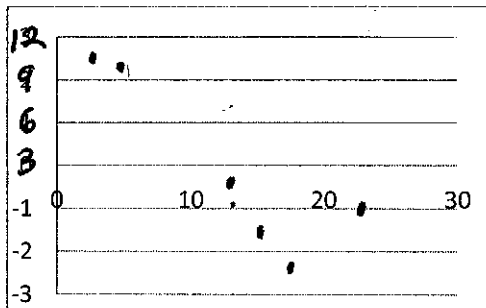
10. For the set of data, perform a residual analysis. Fill in the table with the predicted values and residual values (use 3 decimal places).

$y = .786x - 3.45$ ~~0.03523451~~

x	y	predicted	residual
5	9.12	0.48	8.64
12	7.89	5.982	1.908
22	12.87	13.842	-0.972
18	8.1	10.648	-2.548
3	9	-1.092	10.092
14	5.6	7.554	-1.954

y - predicted y

Construct the residual plot:



pattern

Based on the residuals, is this a good fit? NO Why or why not? ^{pattern}

X-increase
y-decrease