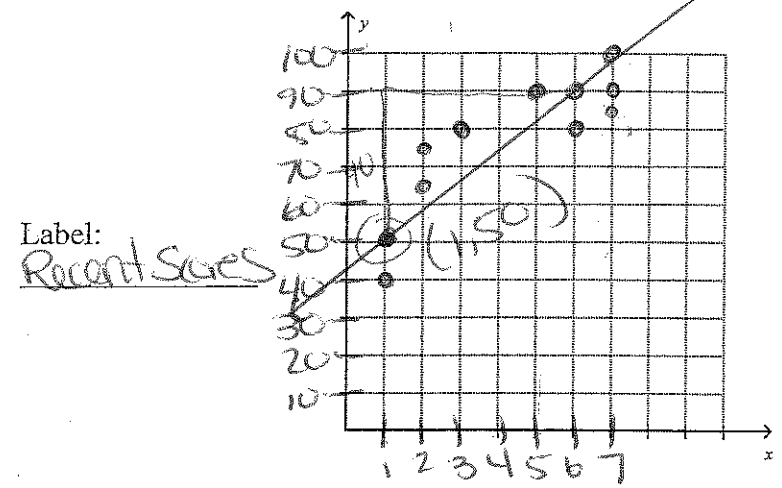
Name: _____

Review Sheet - Scatter Plots

For 1–5, use the table and coordinate grid provided. The data shows the comparison of the number of hours spent studying compared to recent test scores.

1. Plot the data from the table. Make sure that you label the x–axis and the y–axis.

Hours	Recent Score
3	80
5	90
2	75
6	80
7	90
1	50
2	65
7	85
1	40
7	100



Label: Recent Scores

Label: Hours

2. Draw a trend line that best fits the scatter plot. ***Make sure you have arrows on your line.***

3. Write an equation for the line of best fit in Slope-Intercept form ($y = mx + b$). Show your work for full credit.

slope

$\frac{40}{5} = 8$

$y = mx + b$

$50 = 8(1) + b$

$50 = 8 + b$

$-8 \quad -8$

$42 = b$

$y = 8x + 42$

4. In the equation you wrote in #3, the slope, or m = 8.
In the context of the studying/test score situation, this means that...
Every hour of study means you will earn 8 more points.

5. In the equation you wrote in #3, the y-intercept, or b = 42.
In the context of the studying/test score situation, this means that...
If you study 0 hours, you will earn 42 points.

6. Using the equation to #3, if a student earned a score of 72, how many hours did that student study. Show your work for full credit.

$y = 8x + 42$

$72 = 8x + 42$

$-42 \quad -42$

$\frac{30}{8} = \frac{8x}{8}$

$x = 3.75$ hours

7. Using the equation to #3, if a student studies for four hours, what score will they earn? Show your work for full credit.

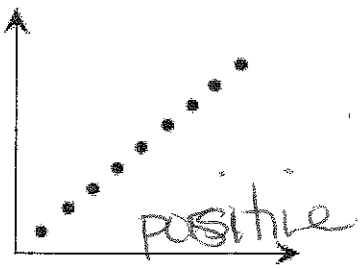
$y = 8x + 42$

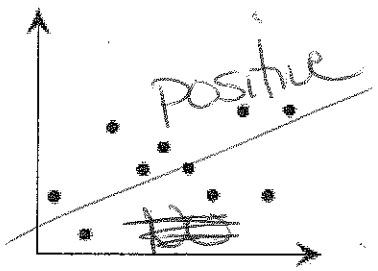
$y = 8(4) + 42$

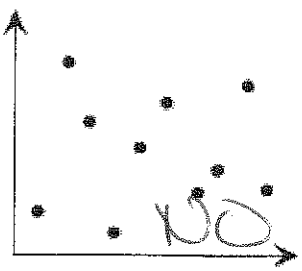
$y = 32 + 42$

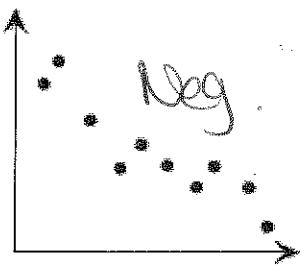
$y = 74$ points

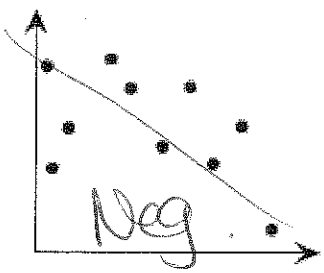
8. For a-f, identify if the scatter plot has a positive association, negative association, or no association.

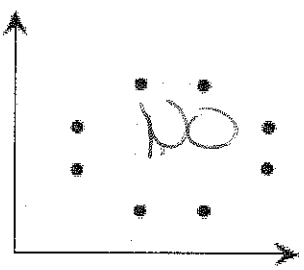
a 

b 

c 

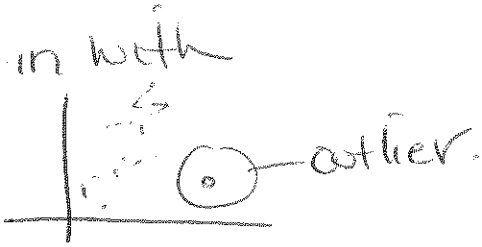
d 

e 

f 

9. What is an outlier? Include a sketch of a graph to help illustrate your explanation.

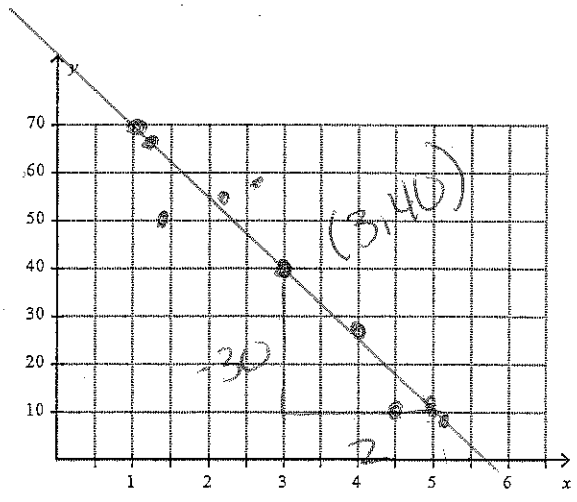
A data item that doesn't fit in with the rest of the data.



For 10–17, use the table below. The table represents an item that is sold at the local store. It compares the price of the item and how many items were sold when it was listed at that price.

Price	Quantity Sold
1	70
1.20	68
5.10	9
4	27
3	40
4	27
2.10	55
1.40	50
4.50	10
2.70	59

Label: Quantity



Label: price

10. Make a scatter plot of the data. Label both the x-axis and the y-axis.

11. Describe the type of the association between the price of an item and the quantity sold.

Negative,
The Nac an item costs, the less people will buy it.

12 . **Draw a trend line that best fits the scatter plot.** ***Make sure you have arrows on your line.***

13. Write an equation for the line of best fit in Slope-Intercept form ($y = mx + b$). Show your work for full credit.

$\frac{-30}{2} = -15$ (3,40)

$y = Mx + b$
$40 = -15(3) + b$
$40 = -45 + b$
$+45 \quad +45$
$85 = b$

$y = -15x + 85$

14. In the equation you wrote in #13, the slope, or m = -15.
In the context of the ~~studying/test~~ price/quantity score situation, this means that...

For every $1 you increase the price 15 less people will buy it.

15. In the equation you wrote in #13, the y-intercept, or b = 85.
In the context of the studying/test score situation, this means that...

If the item was free, 85 people would buy it.

16. Using the equation to #13, if 42 customers buy the item, what was it priced at? Show your work for full credit.

$Y = -15x + 85$

$42 = -15x + 85$

$-85 \quad -85$

$-43 = -15x$

$-15 \quad -15$

$x = 2.86$ $2.87

17. Using the equation to #13, if an item costs $6, how many customers will buy it? Show your work for full credit.

$Y = -15x + 85$

$Y = -15(6) + 85$

$Y = -90 + 85$

$Y = -5$ customers will buy it.

You can't have "-5" customers so it basically means the item is so expensive, no one will buy it.