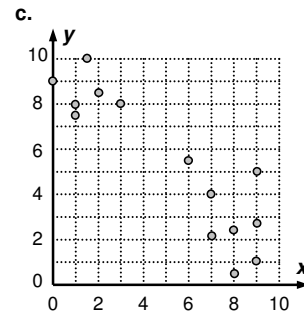
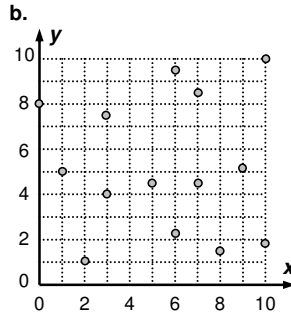
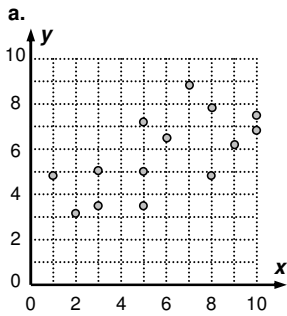


## Scatter Plots: Classwork

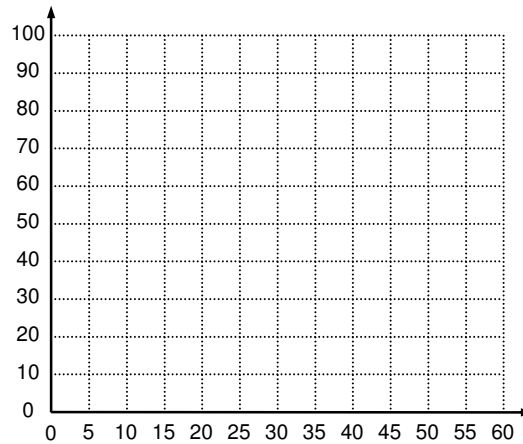
1. Does the scatter plot show a correlation (relationship) between  $x$  and  $y$ ?  
If so, draw a trend line. If not, explain how you know.



2. Corey wants to know if studying for the unit test actually helped. He surveyed students in his class.

- a. Make a scatter plot for his data. Be sure to include all necessary parts.

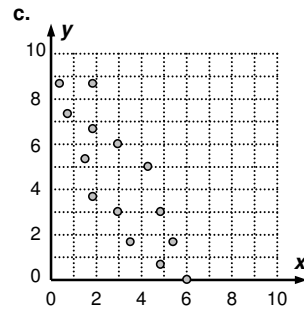
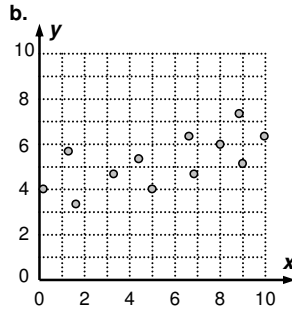
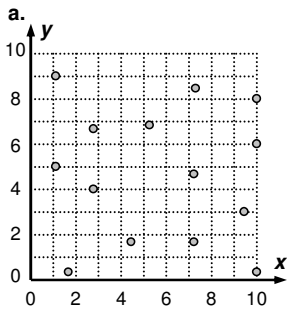
Study Time (min)	Unit Test Scores
0	36
0	29
28	57
30	74
35	68
35	75
40	77
45	70
50	85
50	90
57	91
60	100



- b. Use a ruler to draw in a trend line.
- c. Is there a correlation (relationship) between study time and unit test score? Explain.
- d. Suppose you want to know the test score of a student who studied for 17 minutes.  
Use your trend line to estimate the score. Show your work on the graph.
- e. Suppose you want to know the study time for a student with a score of 80.  
Use your trend line to estimate the study time. Show your work on the graph.
- f. Write a question that could be answered using the scatter plot.
- g. Write a question that could not be answered using the scatter plot.

NAME: \_\_\_\_\_

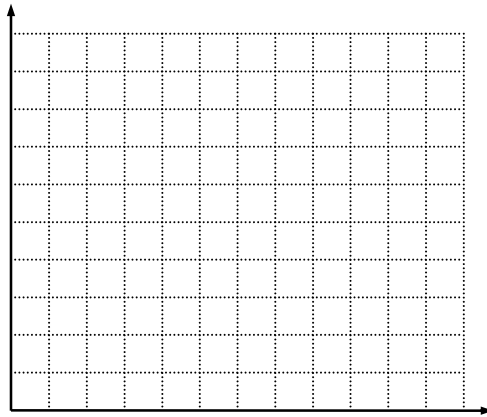
3. Does the scatter plot show a correlation (relationship) between  $x$  and  $y$ ?  
If so, draw a trend line and write an equation for the line. If not, explain how you know.



4. Chumlee wanted to know if there is a relationship between missing work and math quiz scores. He surveyed students in his class and put the data in the table below.

- a. Make a scatter plot for his data. Be sure to include all necessary parts.

Missing Assignments	Math Quiz Scores
0	35
1	35
2	31
3	33
3	25
4	25
5	27
5	18
6	22
11	12
12	5



- b. Use a ruler to draw in a trend line.
- c. Is there a correlation (relationship) between missing assignments and quiz score? Explain.
- d. Find the  $y$ -intercept of your line.  
Find the slope of your line (show your work).  
Write an equation for your trend line.
- e. Suppose you want to know the quiz score of a student who has 10 missing assignments. Estimate the quiz score in two ways – using your equation and using your trend line.
- f. Suppose you want to know the number of missing assignments that a student with a score of 20 has. Estimate the number in two ways – using your equation and using your trend line.

## Scatter Plots: Homework

5. Rick asked each of his friends how many minutes they spent on their homework last night. He organized the results in the table below:

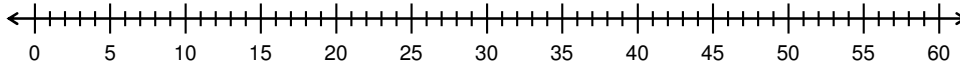
10	15	18	20	22	25	29	30	30	30	32	45	48	49
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- a. Find the five-number summary.

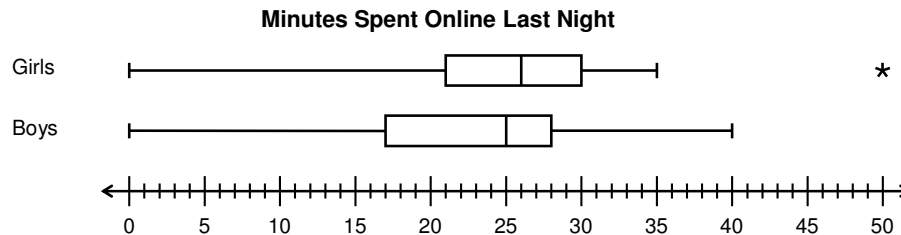
Min:                      LQ:                      Median:                      UQ:                      Max:

- b. Give the interquartile range (IQR).

- c. Make a box-and-whisker plot for the times. Be sure to include a title!



6. The box-and-whisker plot below shows how long girls and boys spent online last night.



- a. **Multiple Choice.** About what percent of girls spent less than 30 minutes?  
**A.** 0%            **B.** 25%            **C.** 50%            **D.** 75%            **E.** 100%
- b. **Multiple Choice.** About what percent of boys spent less than 25 minutes?  
**A.** 0%            **B.** 25%            **C.** 50%            **D.** 75%            **E.** 100%
- c. **Multiple Choice.** Between \_\_\_\_\_ of girls spent more than 20 minutes.  
**A.** 0% and 25%    **B.** 25% and 50%    **C.** 50% and 75%    **D.** 75% and 100%
- d. **Multiple Choice.** Between \_\_\_\_\_ of boys spent more than 20 minutes.  
**A.** 0% and 25%    **B.** 25% and 50%    **C.** 50% and 75%    **D.** 75% and 100%
- e. Make up another question that could be answered using the box-and-whisker plot.