

NAME: _____

Statistics and Probability

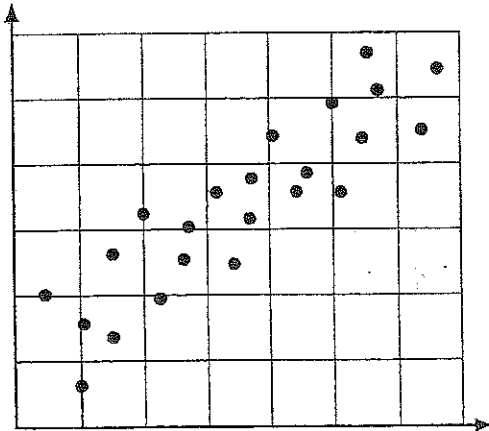
Set 1: Data and Relationships

Station 1

Work with your group to answer the following questions about scatter plots.

1. Anastasia earns high scores on her vocabulary quizzes because she studies a lot! Anastasia's teacher made a list of the most recent quiz scores of 30 of her students. Then she asked each student how many minutes he or she studied for the quiz. She made a scatter plot with the data. What do you think the scatter plot might have shown? Explain.

2. Examine the scatter plot below. What type of relationship do you see between the two sets of data?

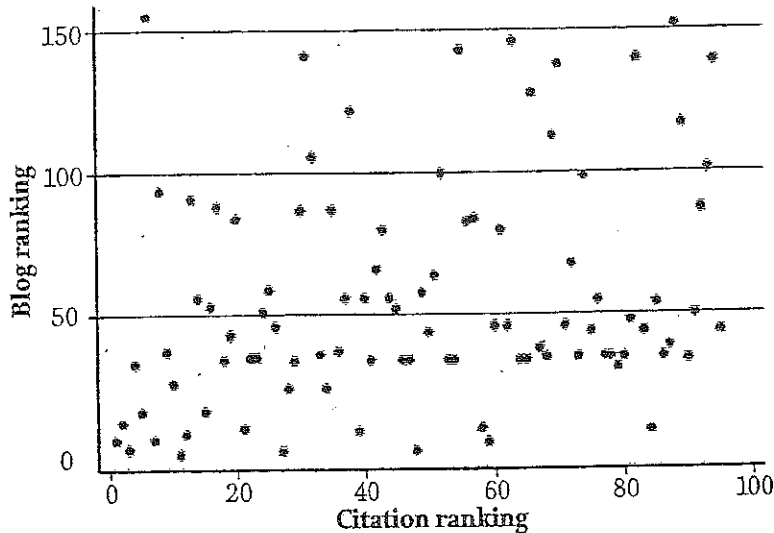


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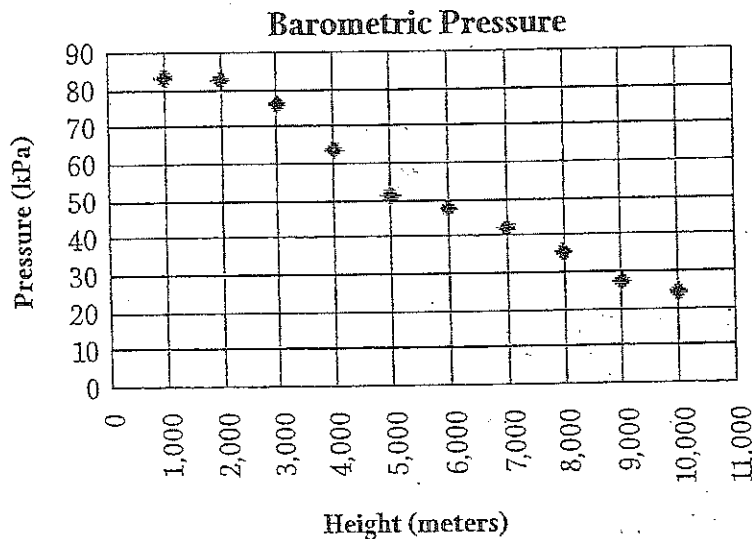
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3. The scatter plot below shows the relationship between two different rankings for blogs. It shows how a number of blogs were rated in each system. How would you describe the relationship?



4. Which of the following statements describes the relationship shown in the scatter plot? Circle the letter of the best answer.

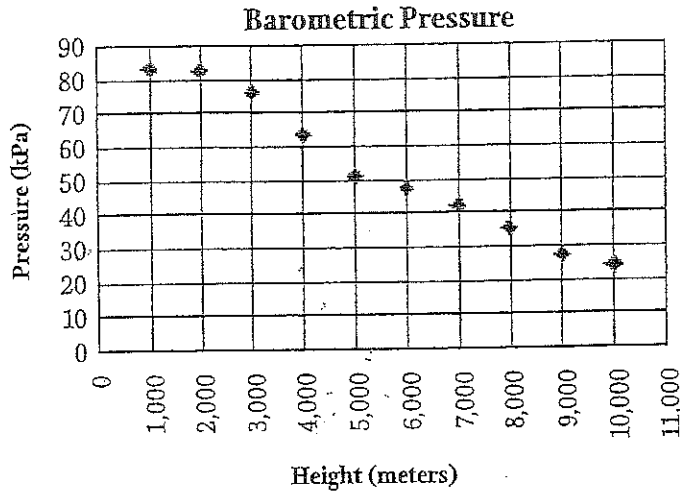


- As the height decreases, the pressure increases.
- As the height decreases, the pressure decreases.
- As the height increases, the pressure increases.

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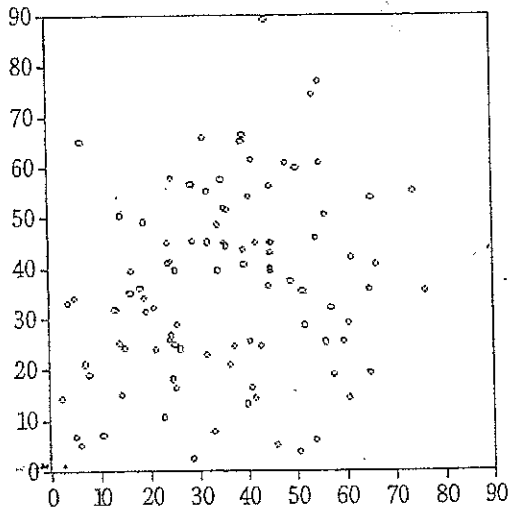
Work with your group to answer the following questions about scatter plots.

5. Examine the scatter plot below.



- What pressure would you expect at a height of 7,500 meters? _____
- At what height would you expect a pressure of 10 kPa? _____

6. Examine the scatter plot below. The x-axis shows the number of dollars each man spent at the mall on Saturday. The y-axis shows the number of e-mails each man sent last week.

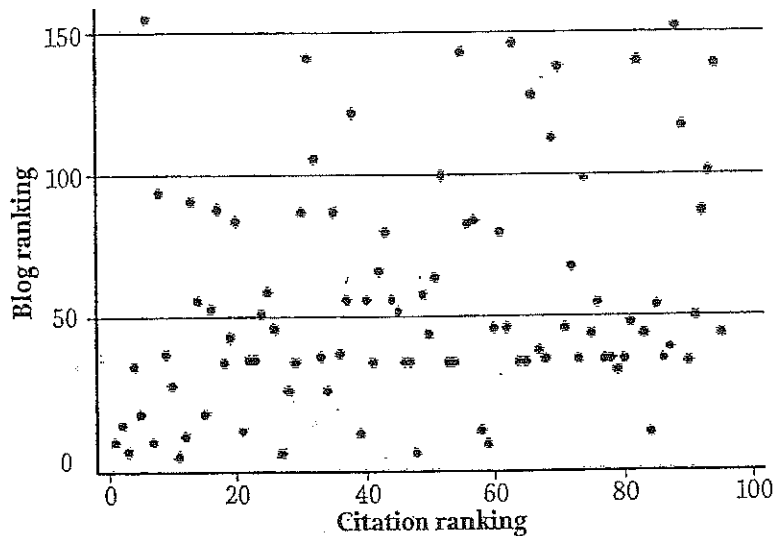


- What relationship do you see in the scatter plot?
- Are you surprised by the results of the scatter plot? Explain.

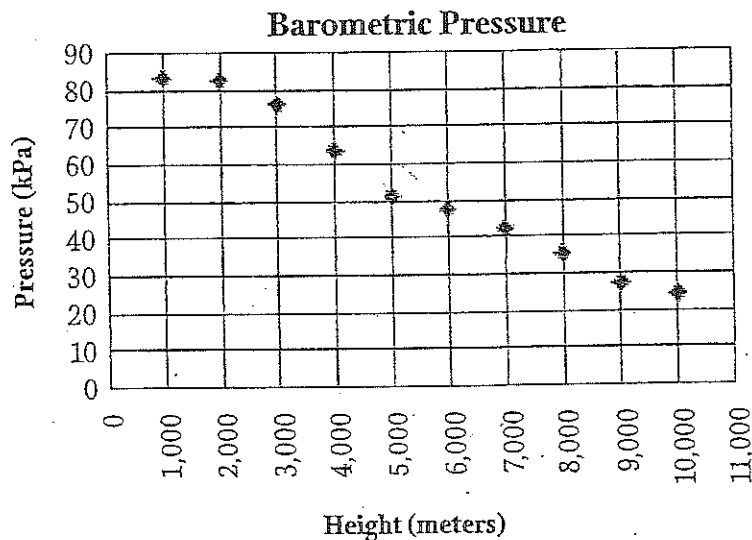
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7. The scatter plot below shows the relationship between two different rankings for blogs. It shows how a number of blogs were rated in each system. How would you describe the relationship?



8. Which of the following statements describes the relationship shown in the scatter plot? Circle the letter of the best answer.



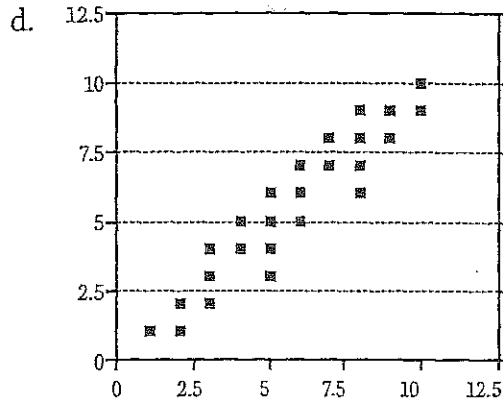
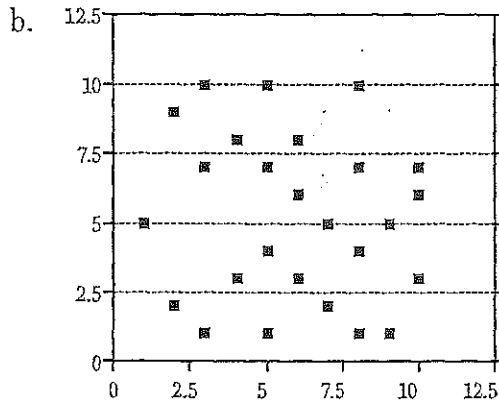
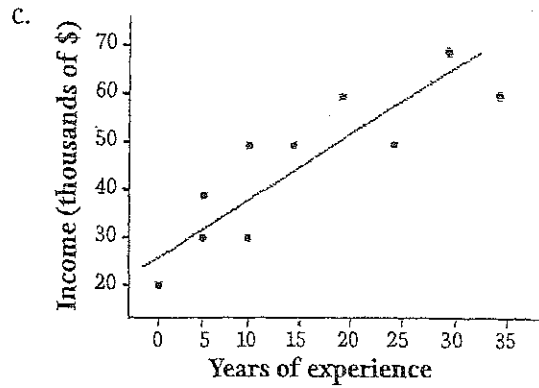
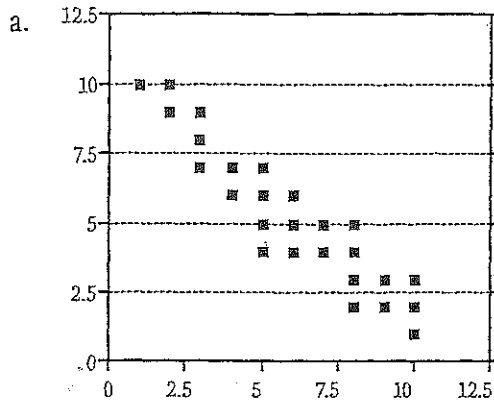
- a. As the height decreases, the pressure increases.
 b. As the height decreases, the pressure decreases.
 c. As the height increases, the pressure increases.

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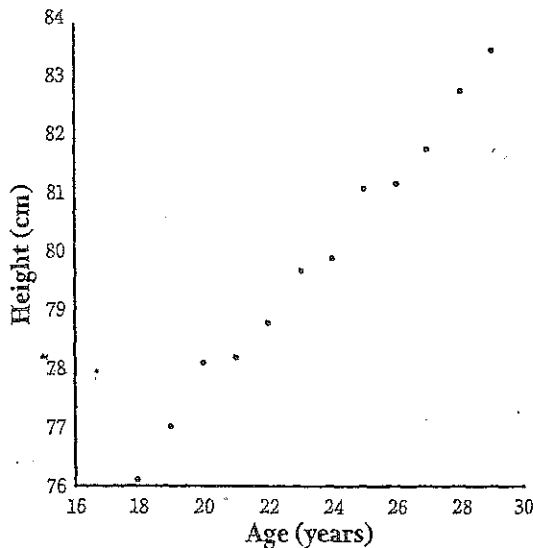
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Set 1: Data and Relationships

9. Which scatter plot(s) below show(s) a negative correlation between the two sets of data? Circle the letter(s) of the best answer(s).



10. The scatter plot below shows the age and height of a sample of individuals. If you added a mark for a 25-year-old who is 76 cm tall, would that fit the relationship exhibited in the scatter plot? What relationship does the scatter plot show? Explain.



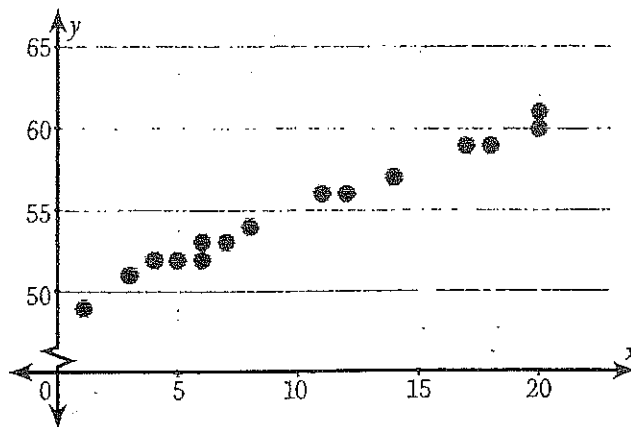
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Set 2: Scatter Plots

Station 2

Work with your group to examine the scatter plot below and answer questions 1–3.



1. Describe the relationship you see between the two sets of data.
2. If you were to guess at the y -value that might correspond to an x -value of 25, what would you say?
3. If you were to guess at the x -value that might correspond to a y -value of 63, what would you say?

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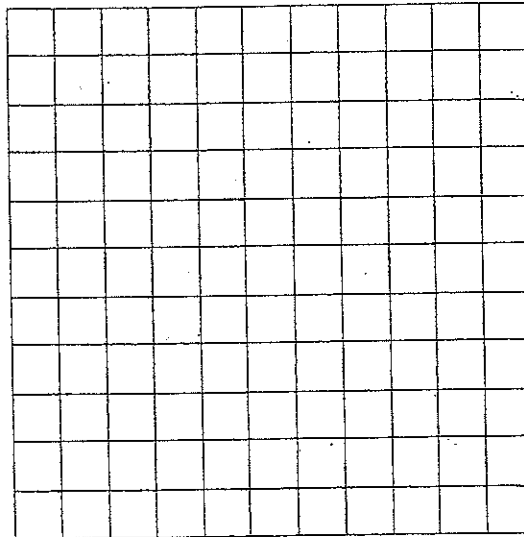
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Set 2: Scatter Plots

The table below shows the number of hours a person spent in the mall and the number of dollars that person spent. Use the table to answer questions 4 and 5.

Hours in mall (x)	Dollars spent (y)
10	40
8	15
9	24
3	20
1	10
2	35
5	50
6	70
7	18
8	25
2	100
3	60

4. Make a scatter plot of the data. Label both axes and title your graph.



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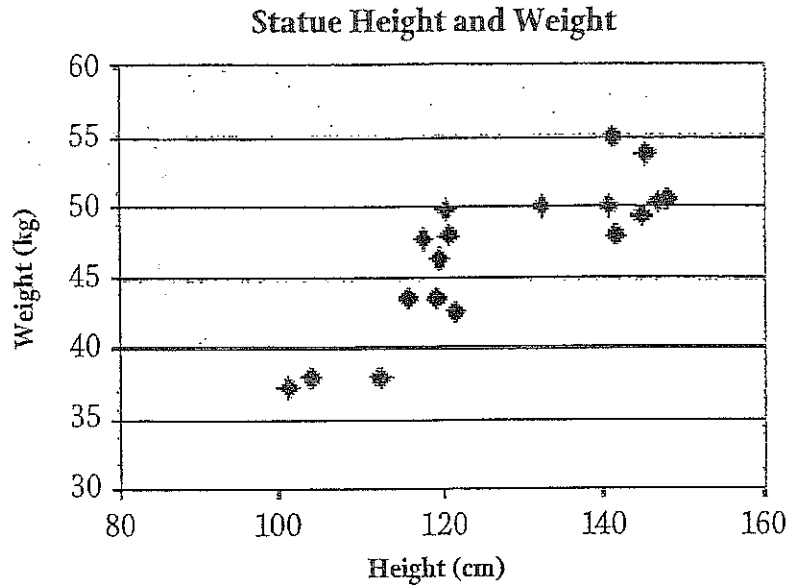
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Set 2: Scatter Plots

5. Describe the relationship you see in the scatter plot you made on the previous page.

Examine the scatter plot below. Use it to answer question 6.



6. What relationship, if any, do you see between the height and the weight of these 18 statues?

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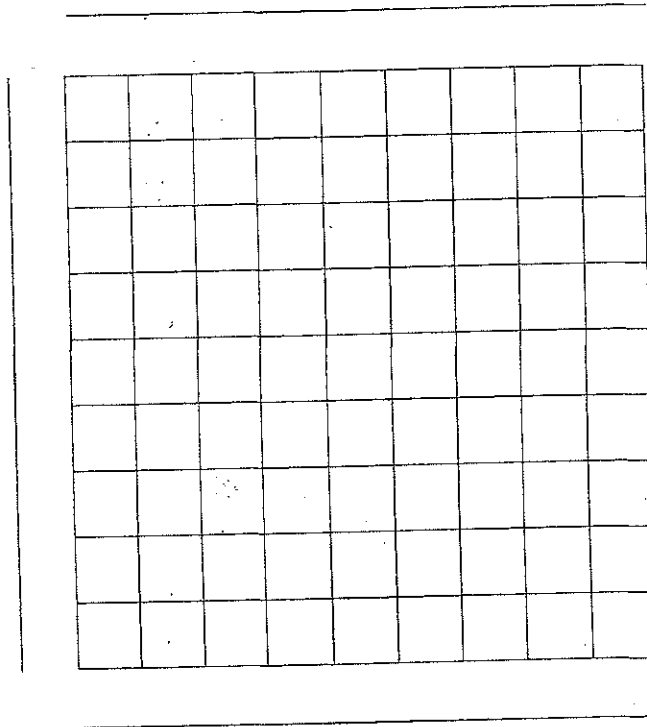
Set 2: Scatter Plots

Station 3

You will be looking at a relationship between two variables and describing other variables that have the same kind of relationship.

The table below contains information about post-high school education and unemployment. Use it to make a line graph. Label the axes of the graph on the lines provided, and give it a title.

Years of education past high school	0	1	2	3	4
Percent of unemployment	9	6	5	4	3



What kind of relationship does the graph show?

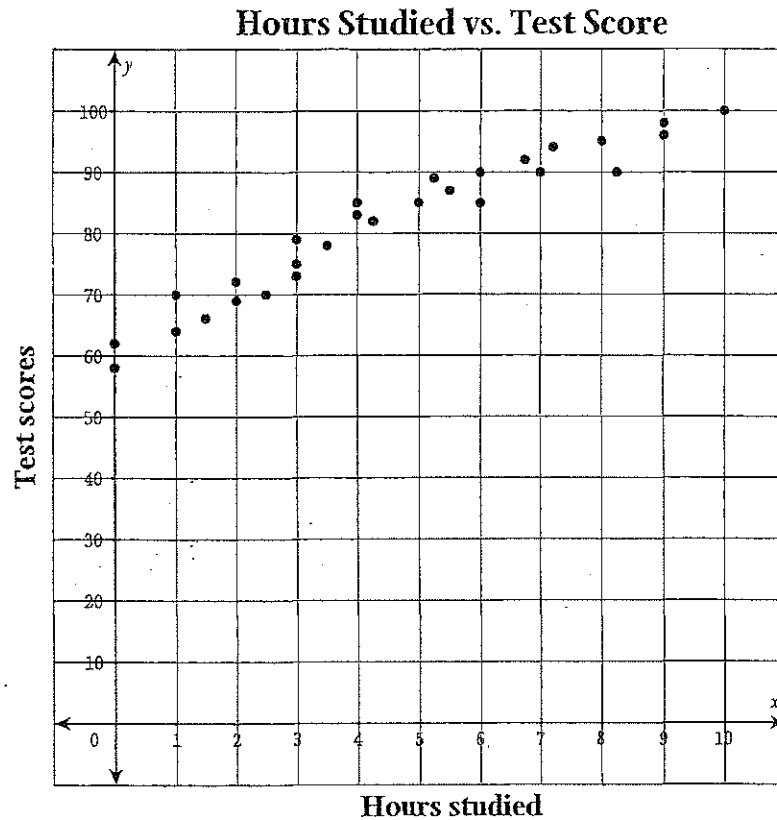
What are some other variables that have a similar relationship?

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Set 2: Scatter Plots

Discuss the following scatter plot with your group, and then work together to answer the questions.



What two pieces of data are being compared in this scatter plot?

What do you notice about the general trend of the data in this scatter plot?

If you were told that a student spent half an hour studying, about what grade would you expect that student to earn on the test?

What information did you use to make that prediction?