

Algebra Worksheet: Scatter Plots and Line of Best Fit

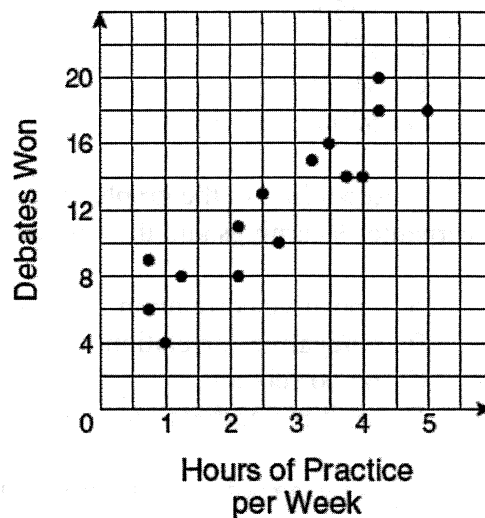
The coaches of a group of debate teams answered a survey about hours of debate, team practice and number of team wins. The graph shows the results of this survey.

- 1) A The scatterplot indicates which of the following?

- A a positive correlation
- B a negative correlation
- C no correlation
- D a parallel correlation

- 2) B Based on these results, if a team practices 4 hours per week next season, which is the best estimate of the number of debates the team can expect to win?

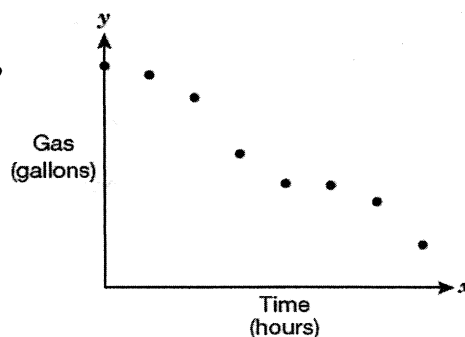
- A 20
- B 16
- C 12
- D 1



Josie and some of her friends rode motorcycles all day on Saturday. She made a table that showed the number of gallons of gas remaining at the end of each hour. The scatterplot below shows the gas that remained in terms of the hours that had passed.

- 3) C Which of the following describes the correlation between the gas that remained and the hours that had passed?

- A Positive correlation
- B No correlation
- C Negative correlation
- D Undefined correlation



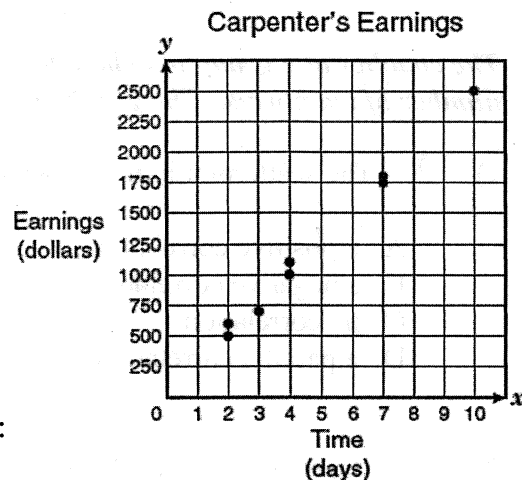
- 4) A Teresa records the ages and weights of 12 children in her neighborhood. If she records this data in a scatterplot, what type of relationship will she most likely see?

- A Positive correlation
- B Negative correlation
- C No correlation
- D Constant correlation

A carpenter recorded the amount of money he earned for different jobs and the amount of time he spent on each job. The data are shown in the scatterplot below:

- 5) C Based on the data, which best represents the amount of money the carpenter would earn from a job that took 5 days to complete?

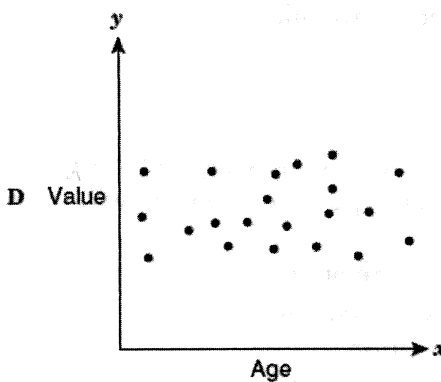
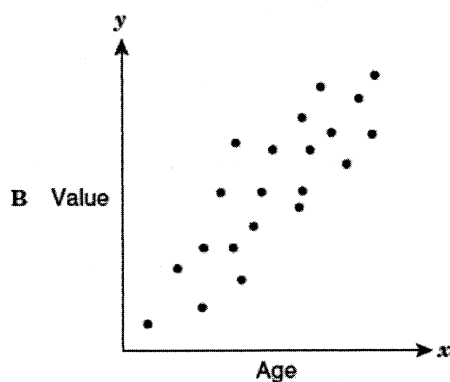
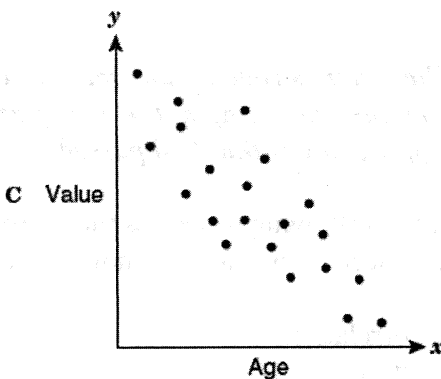
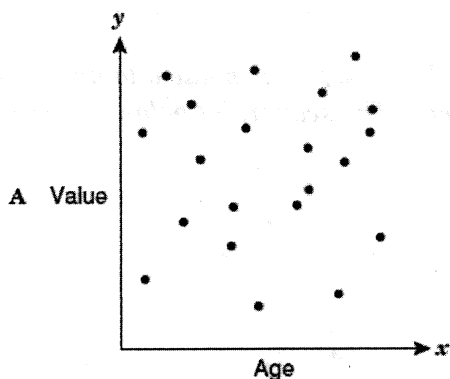
A \$2500
B \$500
C \$1250
D \$200



- 6) A According to the graph, the relationship between the carpenter's earnings and the amount of time he spent on jobs is:

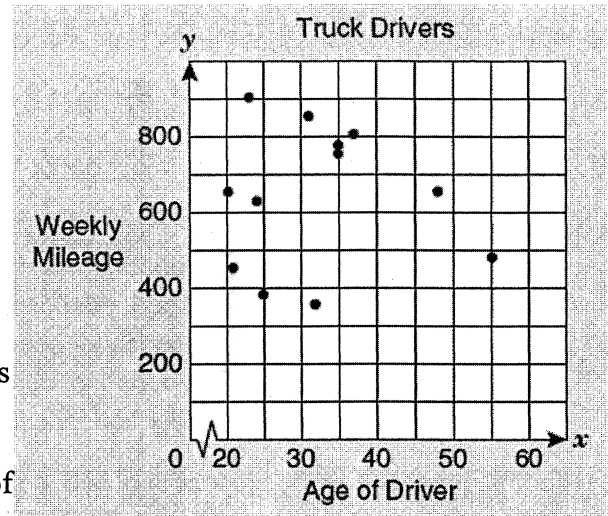
A a positive correlation
B a negative correlation
C no correlation
D multiple correlations

- 7) C As the age of a car increases, its value decreases. Which scatterplot best represents this relationship?



A trucking company keeps track of the number of miles each of its drivers logs each week. The scatterplot below shows the relationship between a driver's age and the number of miles the driver drove last week.

- 8) C Describe the correlation between the number of miles a driver logs and the drivers age.
- A There is a positive correlation between the number of miles a driver logs and the drivers age.
- B There is a negative correlation between the number of miles a driver logs and the drivers age.
- C There is no correlation between the number of miles a driver logs and the drivers age.
- D There is a parallel correlation between the number of miles a driver logs and the drivers age.



The table below shows Cobi's hours of exercise and weight loss each week.

Hours of exercise	Weight loss (pounds)
1.3	0.5
3	2.8
5	3.5
2	2.5
4	3

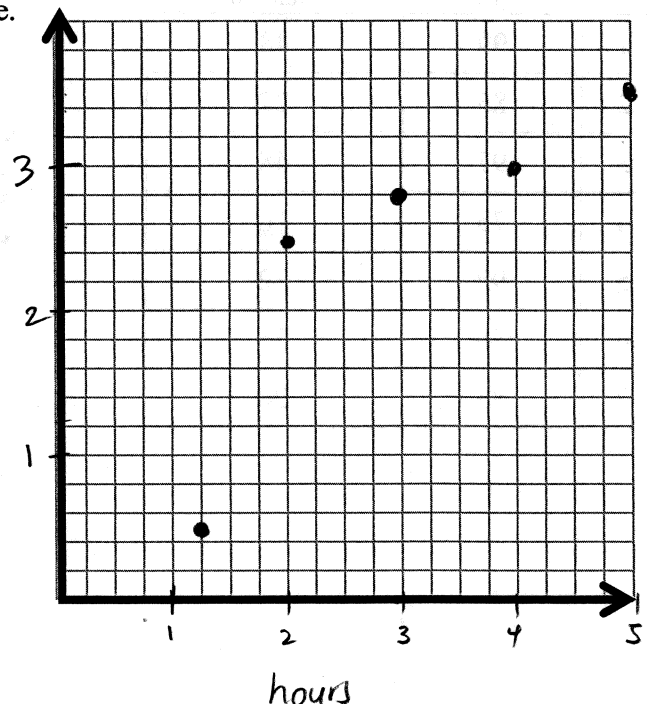
- 9) _____ Create a scatterplot from the data in the table.

- 10) _____ What type of correlation did you find between hours of exercise and weight loss?

Positive

weight loss

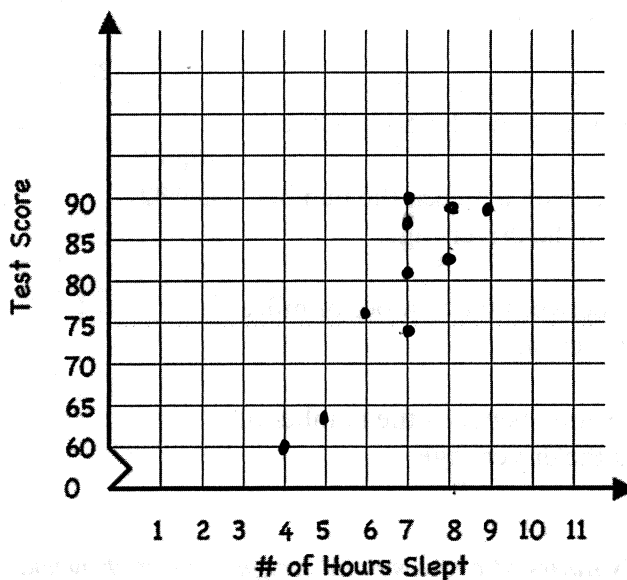
Cobi's Exercise/Weight Loss Program



- 11) A math teacher asked her students how many hours of sleep they had the night before a test. The data below shows the number of hours the student slept and their score on the exam. Plot the data on a scatterplot.

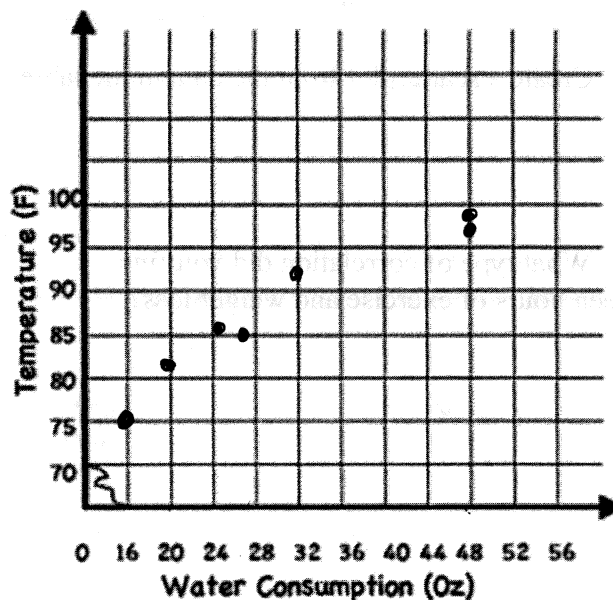
Hours Slept	8	7	7	8	6	5	7	4	9	7
Test Score	83	86	74	88	76	63	90	60	89	81

Positive Correlation



- 12) Assume that during a three-hour period spent outside, a person recorded the temperature and their water consumption. The experiment was conducted on 7 randomly selected days during the summer. The data is shown below. Plot the data on a scatterplot (Hint: Do not use the day on the scatterplot. The water consumption is on the x -axis and the temperature is on the y -axis.) Describe the correlation.

Day	Temperature (F)	Water Consumption (ounces)
1	99	48
2	85	27
3	97	48
4	75	16
5	92	32
6	86	25
7	83	20



Positive Correlation