

2-5 Skills Practice

Scatter Plots and Lines of Regression

For Exercises 1–3, complete parts a–c.

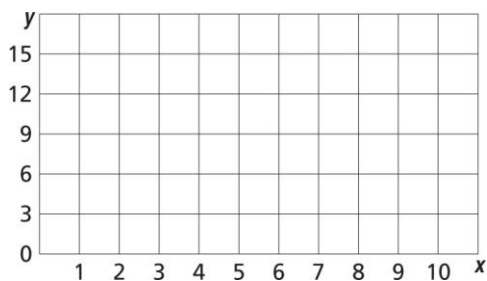
a. Make a scatter plot and a line of fit, and describe the correlation.

b. Use two ordered pairs to write a prediction equation.

c. Use your prediction equation to predict the missing value.

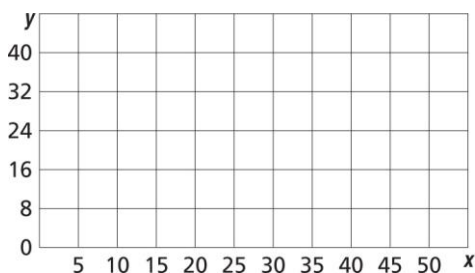
1.

x	y
1	1
3	5
4	7
6	11
7	12
8	15
10	?



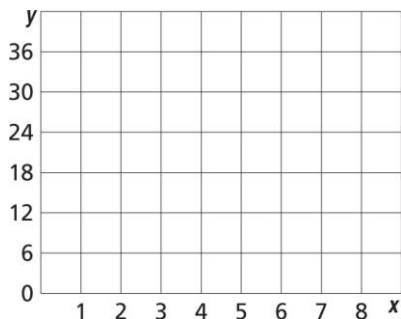
2.

x	y
5	9
10	17
20	22
25	30
35	38
40	44
50	?



3.

x	y
1	16
2	16
3	?
4	22
5	30
7	34
8	36



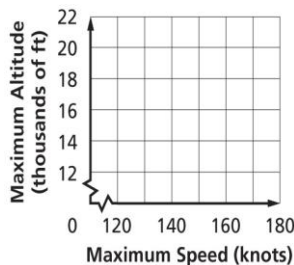
2-5 Word Problem Practice

Scatter Plots and Lines of Regression

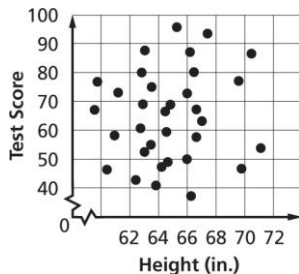
- 1. AIRCRAFT** The table shows the maximum speed and altitude of different aircraft. Draw a scatter plot of this data.

Max. Speed (knots)	121	123	137	173	153
Max. Altitude (1000 feet)	14.2	17.0	15.3	20.7	16.0

Source: RisingUp Aviation

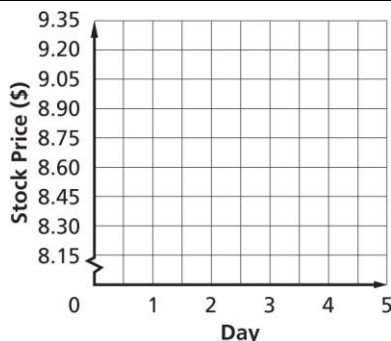


- 2. TESTING** The scatter plot shows the height and test scores of students in a math class. Describe the correlation between heights and test scores.

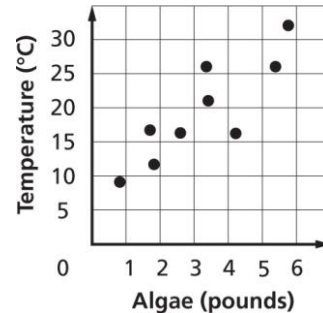


- 3. STOCKS** The prices of a technology stock over 5 days are shown in the table. Draw a scatter plot of the data and a line of fit.

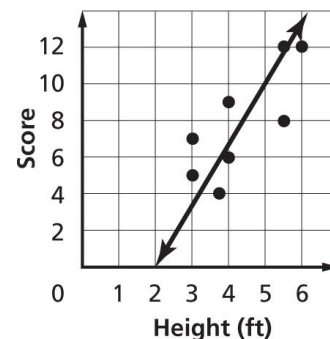
Day	1	2	3	4	5
Price	8.30	8.60	8.55	8.90	9.30



- 4. ALGAE** One type of algae grows fastest at 31°C. The scatter plot shows data recording the amount of algae and the temperature of the water in various aquarium tanks. Draw a line of fit for this data and write a prediction equation. Will this prediction equation be accurate for temperatures above 31°C?



- 5. SPORTS** The scatter plot shows the height and score of different contestants shooting darts.



a. What is the equation of the line of fit?

b. What do you predict someone 5 feet tall would score?