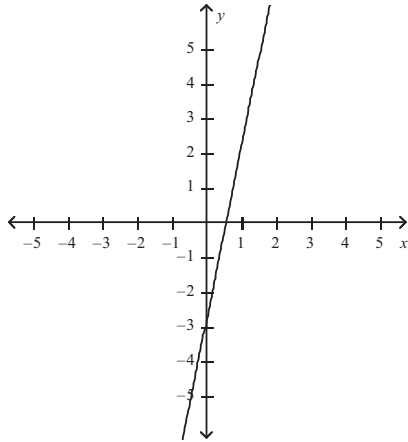
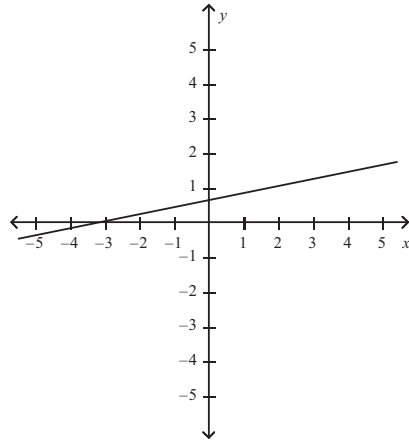


85. Tell whether the function  $y = 5x - 3$  is linear. If so, graph the function.

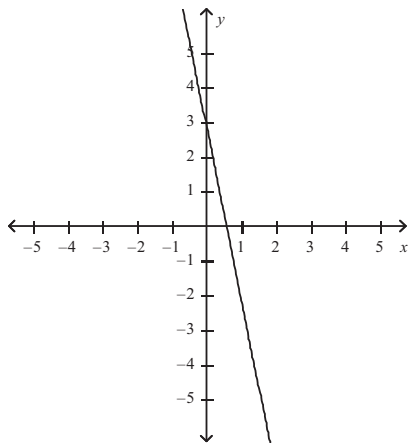
A.)



C.)



B.)



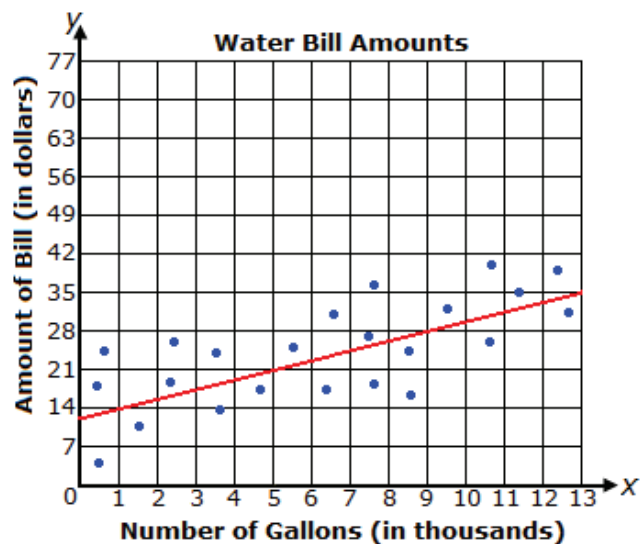
D.) Not a linear function.

### A1.2.2.2

Analyze and/or interpret data on a scatter plot.

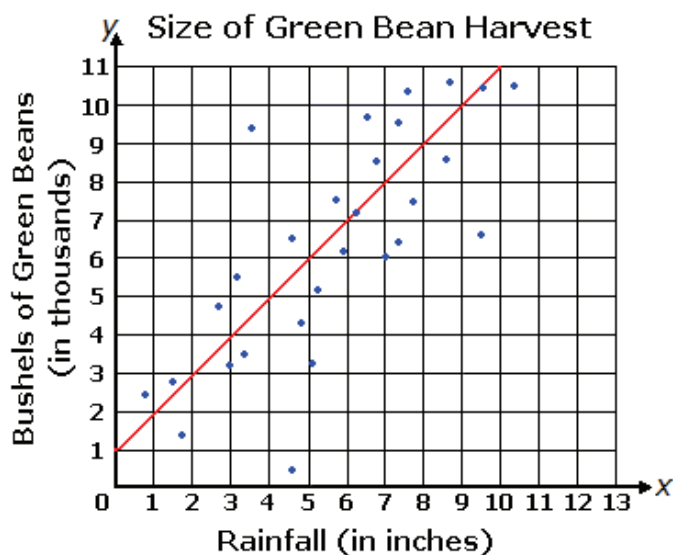
86. The graph shows a line of best fit for data collected on the amount of water bills in relation to the number of gallons of water used. What is the equation of the line of best fit?

- A.)  $y = \frac{1}{4}x + \frac{49}{4}$   
 B.)  $y = \frac{7}{4,000}x + \frac{49}{4}$   
 C.)  $y = -\frac{1}{4}x + \frac{49}{4}$   
 D.)  $y = -\frac{7}{4,000}x + \frac{49}{4}$



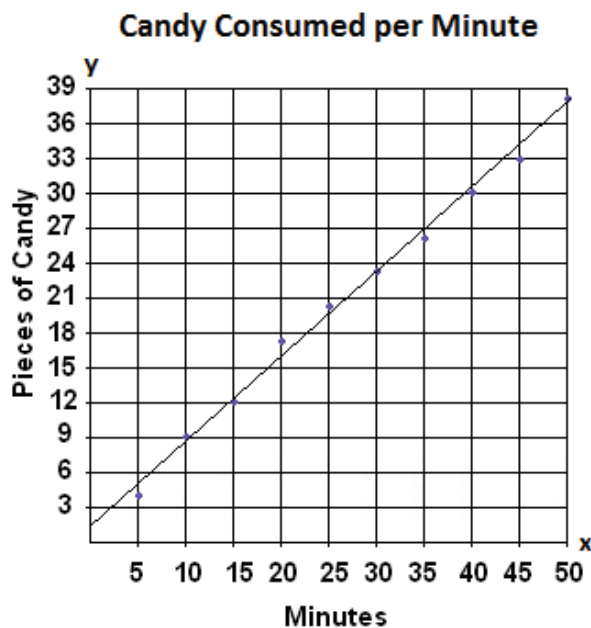
87. The graph shows a line of best fit for data collected on the size of green bean harvests in relation to the amount of rainfall. What is the equation of the line of best fit?

- A.)  $y = x + 1,000$
- B.)  $y = x + 1$
- C.)  $y = 1,000x + 1$
- D.)  $y = 1,000x + 1,000$



88. Which of the following equations represents the line that is drawn below?

- A.)  $y = 0.72x + 1.4$
- B.)  $y = 0.72x - 1.4$
- C.)  $y = -0.72x - 1.4$
- D.)  $y = -0.72x + 1.4$



### **A1.2.3.1**

Use measure of dispersion to describe a set of data.

89. The daily high temperatures, in degrees Fahrenheit, of a town are recorded for one year. The median high temperature is 62 F. The interquartile range of high temperatures is 32. Which is **most likely** to be true?

- A.) Approximately 25% of the days had a high temperature less than 30 F.
- B.) Approximately 25% of the days had a high temperature less than 62 F.
- C.) Approximately 50% of the days had a high temperature less than 62 F.
- D.) Approximately 75% of the days had a high temperature less than 94 F.

90. What is the range of the following set of numbers? {23,45,43,46,23}

- A.) 0
- B.) 13
- C.) 23
- D.) 1

91. What is the interquartile range of the following set of numbers?

{398,464,486,524,505,421,442}

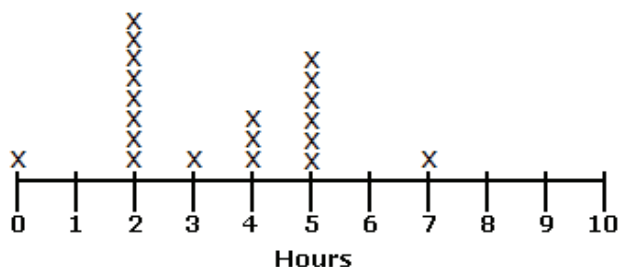
- A.) 107
- B.) 84
- C.) 126
- D.) 464

### **A1.2.3.2**

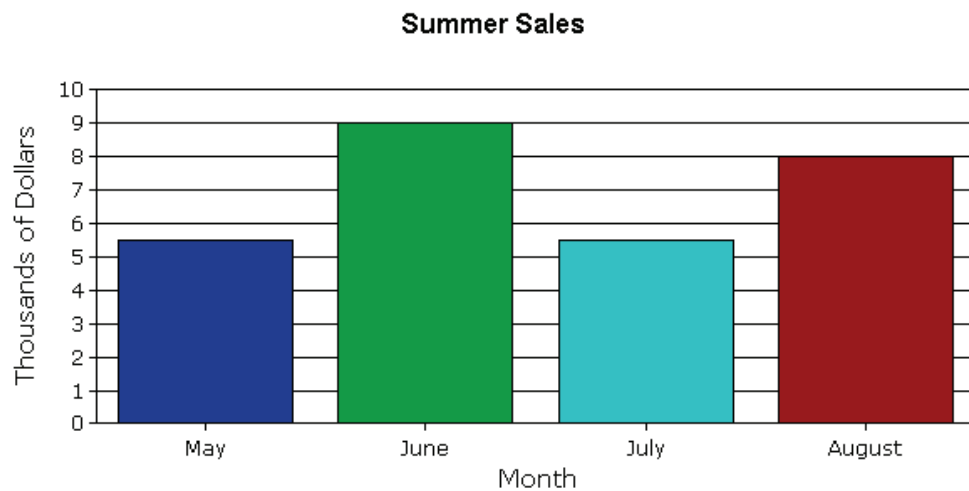
Use data displays in problem-solving settings and/or to make predictions.

92. The line plot below shows the number of hours each student in Ms. Smith's class exercise each week. What is the median of the data in the graph?

- A.) 3.7 hours
- B.) 3.4 hours
- C.) 2.5 hours
- D.) 3.5 hours

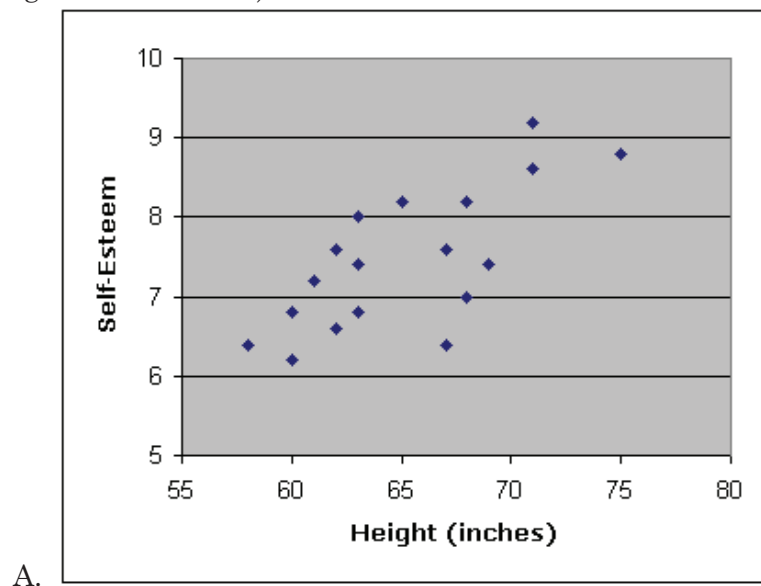


93. A company made a bar graph showing the amount of sales for each month in thousands of dollars. Which is the closest to the mean amount of sales for the 4-month period?



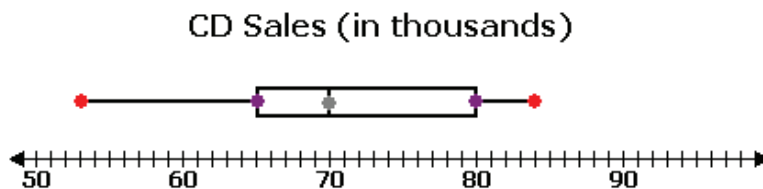
- A.) \$7500                      C.) \$7000  
 B.) \$7625                      D.) \$6500

94. The graph below shows the results of an analysis of a group of eighteen male students. Height is measured in inches and self-esteem is measured by taking the average of the student's responses on a survey (where 1 means lowest self-esteem and 10 means highest self-esteem).



- A.) As an individual's height increases, self-esteem decreases.  
 B.) There is no relationship between an individual's height and self-esteem.  
 C.) As an individual's height decreases, self-esteem increases.  
 D.) As an individual's height increases, self-esteem increases.

95. The number of CD sales for a new musical group over a six-month period are represented by the box plot below



Which set of data below represents the median and the third quartile, in that order?

- |            |            |
|------------|------------|
| A.) 53, 65 | C.) 70, 84 |
| B.) 53, 80 | D.) 70, 80 |

96. What is the range of the data shown in the stem-and-leaf plot above?

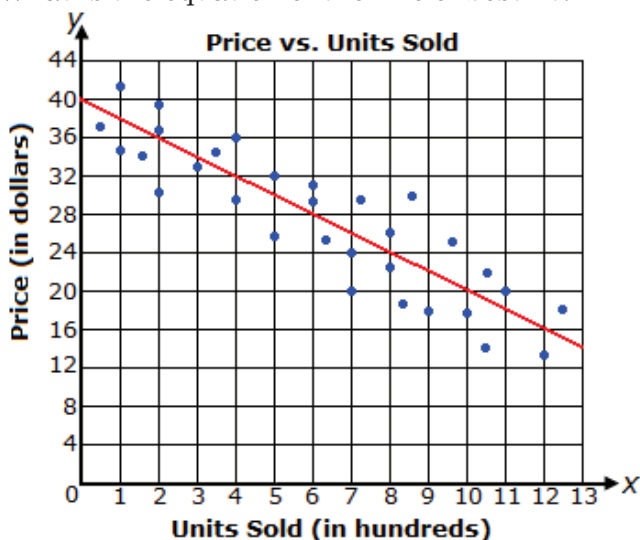
stem   leaf	
749   3 3 4 5 7 9	A.) 45
750   1 1 1 2 4 5 6 7 8 8 8 9 9	B.) 5
751   1 3 3 3 4 6 8 9 9	C.) 48
752   1 2 2 3 3 3 4 7 8 9	D.) 38
753   1 1 2 4 5 6 8 8	

97. The following stem-and-leaf plot shows the scores on the most recent math exam. What is the mode of these values?

5   0 1 3 5 8 9	A.) 97
6   3 5 6 6 7	B.) 88
7   1 2 2 7 9	C.) 83
8   0 3 3 3 4 6 8 8	D.) 66
9   2 4 4 7 7 9	

98. The graph above shows a line of best fit for data collected on the price of a unit in relation to the number of units sold. What is the equation of the line of best fit?

- A.)  $y = -\frac{1}{2}x + 40$
- B.)  $y = -\frac{1}{50}x + 10$
- C.)  $y = -\frac{1}{50}x + 40$
- D.) None of the above

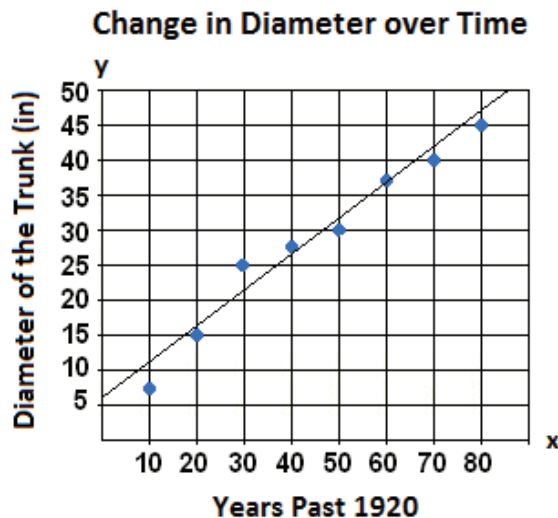


99. Crystal's grandmother planted a tree on the farm in 1920. She measured the tree trunk's diameter every 10 years and recorded the measurements. The scatter plot below shows the progress of the diameter. (The year 1930 is equivalent to 10 on the graph.)

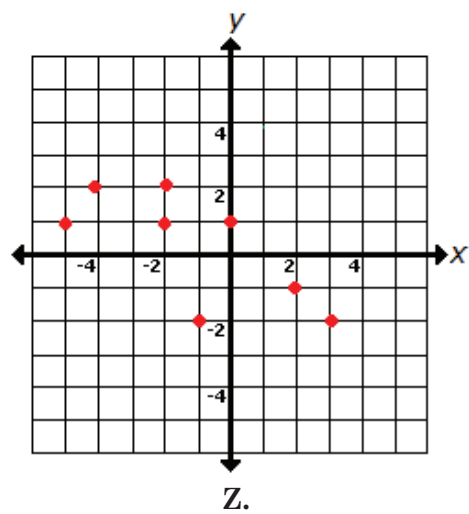
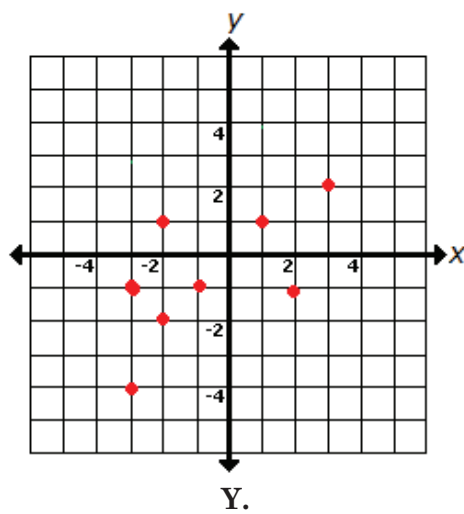
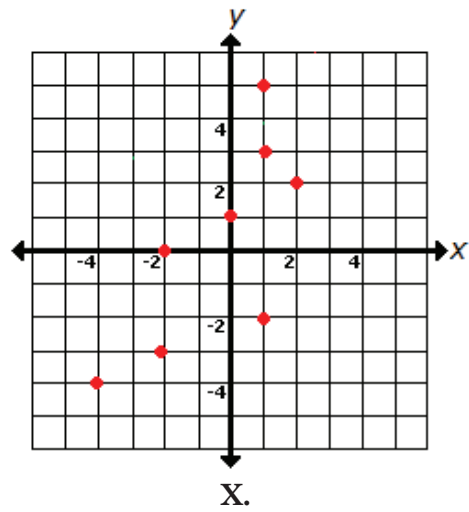
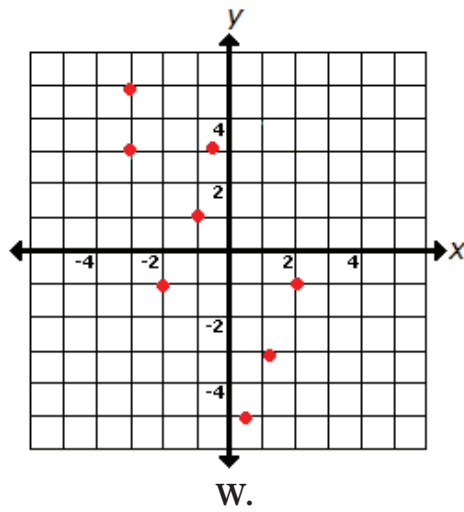
$$y = 0.507x + 5.543$$

Looking at the line of best fit equation shown below the graph, what will be the approximate diameter of the tree in 2010?

- A.) 56.243 inches
- B.) 46.103 inches
- C.) 45.63 inches
- D.) 51.173 inches



100. Which scatterplot most likely has a line of best fit represented by  $y = 2x + 1$ ?



A.) W

C.) Y

B.) X

D.) Z

**A1.2.3.3**

Apply probability to practical situations.

101. A number cube with sides labeled 1 through 6 is rolled two times, and the sum of the numbers that end face up is calculated. What is the probability that the sum of the numbers is 3?

- |            |           |
|------------|-----------|
| A.) $1/18$ | C.) $1/9$ |
| B.) $1/12$ | D.) $1/2$ |

102. Bobby is taking a multiple-choice history test. He has decided to randomly guess on the first two questions. On each question there are 4 answer choices. What is the probability that he answers the first question correctly and the second question correctly?

- |            |            |
|------------|------------|
| A.) $9/16$ | C.) $1/16$ |
| B.) $3/16$ | D.) $1/4$  |

103. Holly is flipping a coin and pulling a marble from a bag. There are 4 white marbles, 2 blue marbles, and 5 green marbles, all of the same size, in the bag. What is the probability that the coin lands on heads and she pulls a green marble from the bag?

- |            |            |
|------------|------------|
| A.) $5/22$ | C.) $1/4$  |
| B.) $6/13$ | D.) $3/11$ |