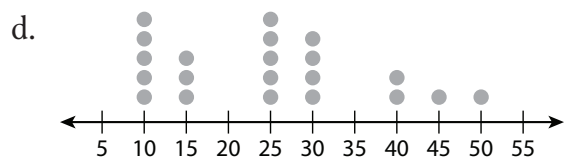
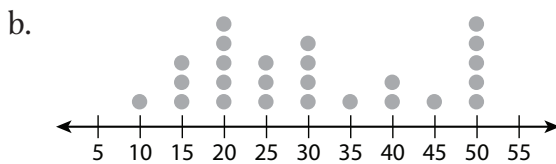
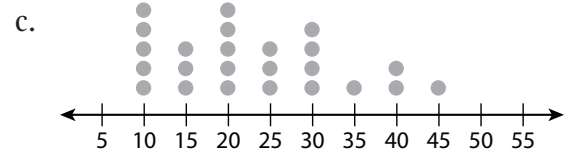
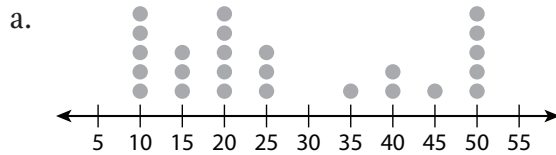


UNIT 6 • DESCRIBING DATA**Lesson 1: Summarizing, Representing, and Interpreting Data on a Single Measurement Variable****Assessment****Pre-Assessment**

Circle the letter of the best answer.

1. Which dot plot represents the data set?

10, 10, 10, 10, 10, 15, 15, 15, 25, 25, 25, 25, 25, 30, 30, 30, 30, 40, 40, 45, 50



2. What is the median of the data set?

210, 340, 225, 330, 800, 288, 225

- a. 210
b. 330
c. 288
d. 800

3. The speeds, in miles per hour, of six drivers are shown. What is the mean absolute deviation?

52, 61, 62, 68, 70, 73

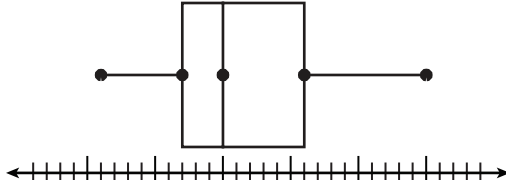
- a. 5.5
b. 6
c. 6.2
d. 7

continued

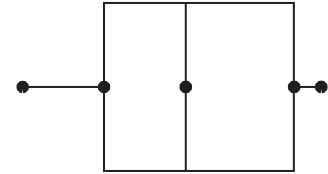
UNIT 6 • DESCRIBING DATA**Lesson 1: Summarizing, Representing, and Interpreting Data on a Single Measurement Variable****Assessment**

4. Which box plot has an interquartile range of 6?

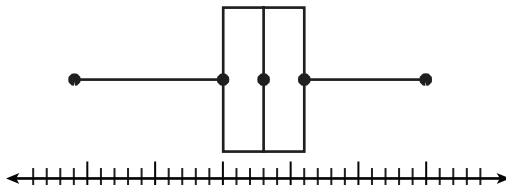
a.



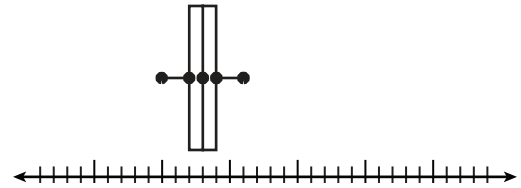
c.



b.



d.



5. Which data set could have an outlier?

a. 4, 5, 10, 13, 14, 22, 25, 28

c. 7, 11, 13, 15, 18, 21, 29, 30

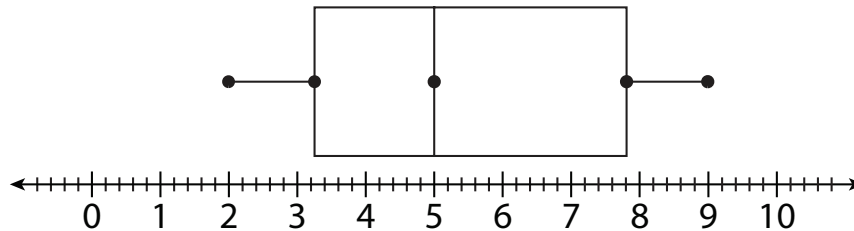
b. 0, 0, 0, 1, 1, 1, 2, 2, 2, 4, 4

d. 4, 42, 46, 50, 55, 56, 62, 68

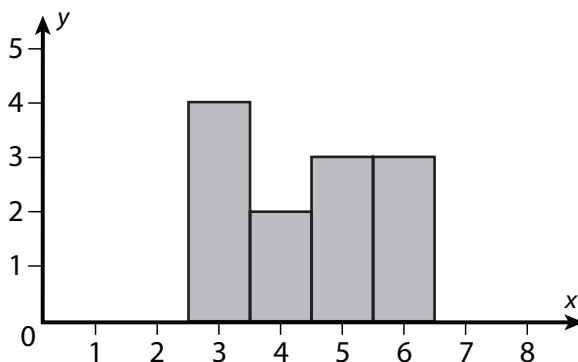
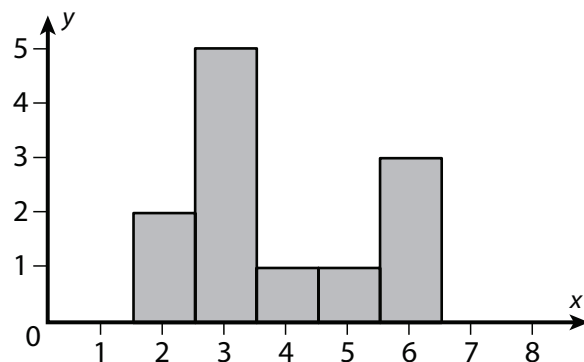
UNIT 6 • DESCRIBING DATA**Lesson 1: Summarizing, Representing, and Interpreting Data on a Single Measurement Variable****Assessment****Progress Assessment**

Circle the letter of the best answer.

1. What is the median of the data set used to create the box plot?



- a. 4.5
b. 5
c. 6.6
d. 2.1
2. What is the interquartile range of the following data?
- 56 59 58 51 54 53 53 51 50 57 54 49 43 48 59
- a. 3.5
b. 43
c. 16
d. 7
3. Which comparison is true of the following two data sets?

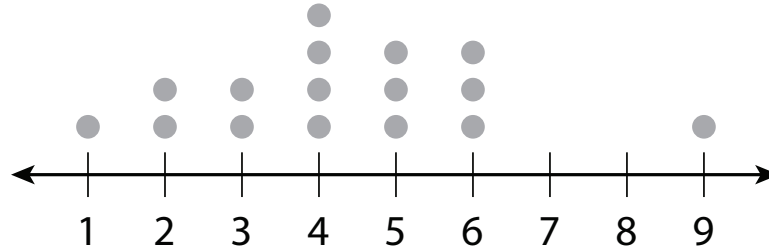
Data Set 1**Data Set 2**

- a. data set 1: greater mean; data set 1: greater variation
b. data set 1: greater mean; data set 2: greater variation
c. data set 2: greater mean; data set 1: greater variation
d. data set 2: greater mean; data set 2: greater variation

continued

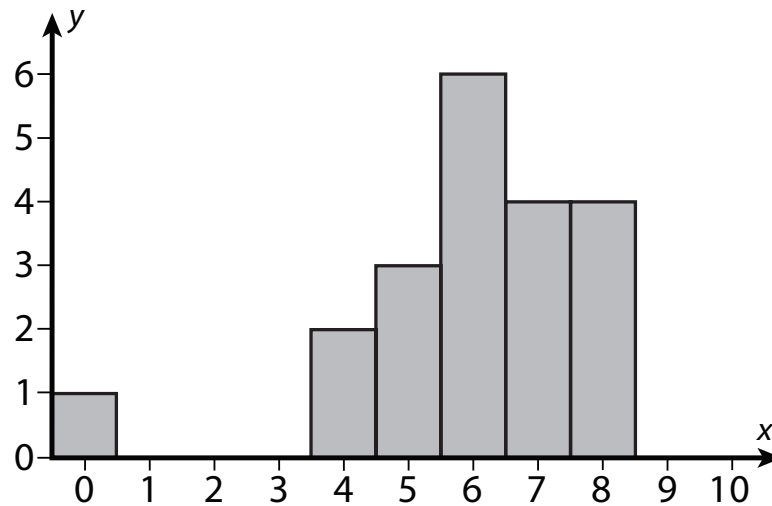
UNIT 6 • DESCRIBING DATA**Lesson 1: Summarizing, Representing, and Interpreting Data on a Single Measurement Variable****Assessment**

4. Which data set does the dot plot represent?



- a. data set 1: {1, 2, 2, 3, 3, 4, 4, 4, 4, 5, 5, 5, 6, 6, 6, 9}
- b. data set 2: {1, 2, 3, 4, 5, 6, 9}
- c. data set 3: {1, 2, 3, 4, 5, 6, 7, 8, 9}
- d. data set 4: {1, 2, 2, 3, 3, 4, 4, 4, 5, 5, 5, 5, 6, 6, 6, 9}

5. Which value appears to be an outlier?



- a. 0
- b. 8
- c. 4
- d. 6

continued

UNIT 6 • DESCRIBING DATA

Lesson 1: Summarizing, Representing, and Interpreting Data on a Single Measurement Variable

Assessment

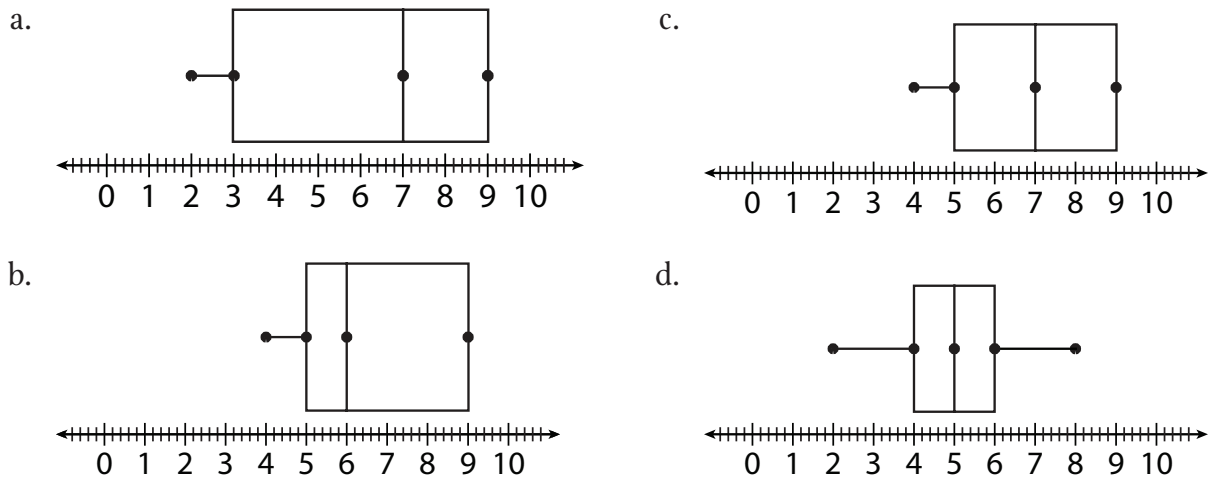
6. What is the mean absolute deviation of the data?

36 39 35 38 31 32 36 39 38 31 30 39
41 35 31 29 35 39 40 42

- a. 13
- b. 7.5
- c. 66.4
- d. 3.3

7. Which box plot represents the data?

4 4 5 5 5 5 6 7 7 9 9 9 9 9 9



8. Which comparison is true of the following two data sets?

Data Set 1											
62	69	53	64	68	51	53	59	64	68	72	63

Data Set 2											
75	72	73	76	64	69	68	59	68	73	70	61

- a. data set 1: greater mean; data set 1: greater absolute variation
- b. data set 1: greater mean; data set 2: greater absolute variation
- c. data set 2: greater mean; data set 1: greater absolute variation
- d. data set 2: greater mean; data set 2: greater absolute variation

continued

UNIT 6 • DESCRIBING DATA**Lesson 1: Summarizing, Representing, and Interpreting Data on a Single Measurement Variable****Assessment**

Use the given data to complete the following problem.

11. The following tables list 10-day high temperature forecasts from two different sources for Portland, ME.

Forecast 1

Day	Temperature (°F)
1	92
2	87
3	73
4	67
5	62
6	67
7	76
8	75
9	73
10	71

Forecast 2

Day	Temperature (°F)
1	88
2	87
3	71
4	65
5	61
6	65
7	72
8	72
9	71
10	70

- Are there any outliers in either set?
- Calculate at least one measure of center for each forecast.
- Calculate at least one measure of spread for each forecast.
- Describe the similarities and differences in the forecasts using measures of center, shape, and spread. Include a visual representation of the data.

Name: _____

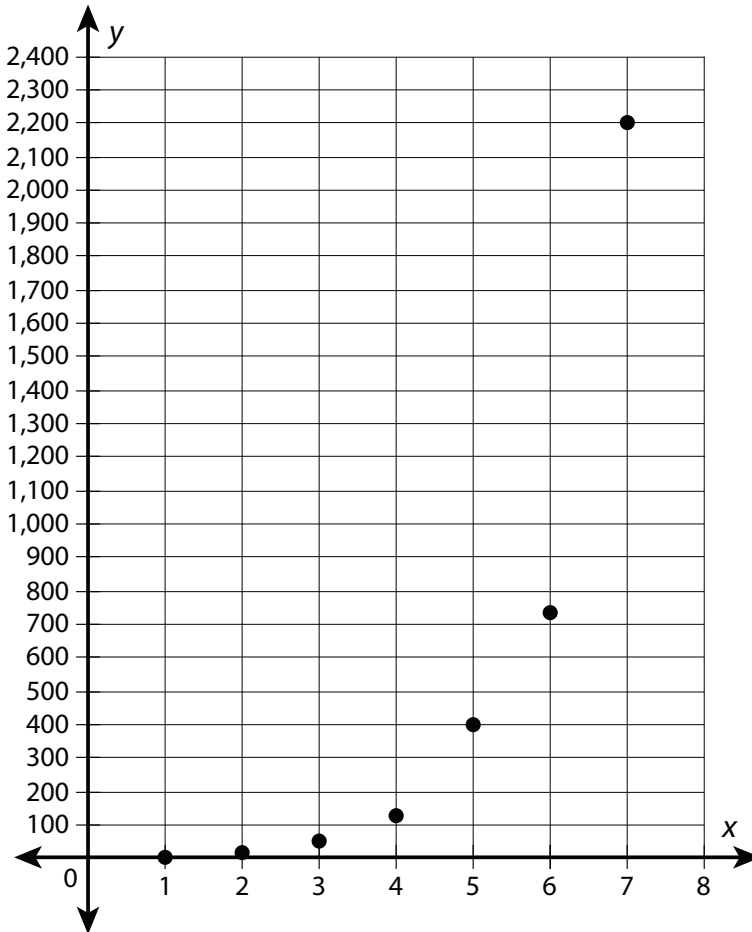
Date: _____

UNIT 6 • DESCRIBING DATA

Lesson 2: Working with Two Variables

Assessment

5. Which function could be used to estimate the data in the following scatter plot?



a. $y = 3x + 35$

b. $y = 3^x + 35$

c. $y = (-3)^x + 35$

d. $y = 3x - 35$

UNIT 6 • DESCRIBING DATA

Lesson 2: Working with Two Variables

Assessment

Progress Assessment

Circle the letter of the best answer.

1. Vince asks baseball players how many years they have played baseball. He separates the responses by school grade and records them in the following table. What is the joint frequency of ninth graders who have played for 4 years?

Grade	Years playing baseball				
	4	5	6	7	8
8th grade	9	7	4	1	1
9th grade	6	8	5	3	2
10th grade	2	4	10	8	3
11th grade	1	0	7	14	5
12th grade	0	1	2	9	10

- a. 1
b. 2
c. 6
d. 9
2. Grace asks her friends which car they prefer. She separates the responses by gender and lists them in the following table. What is the marginal frequency of males?

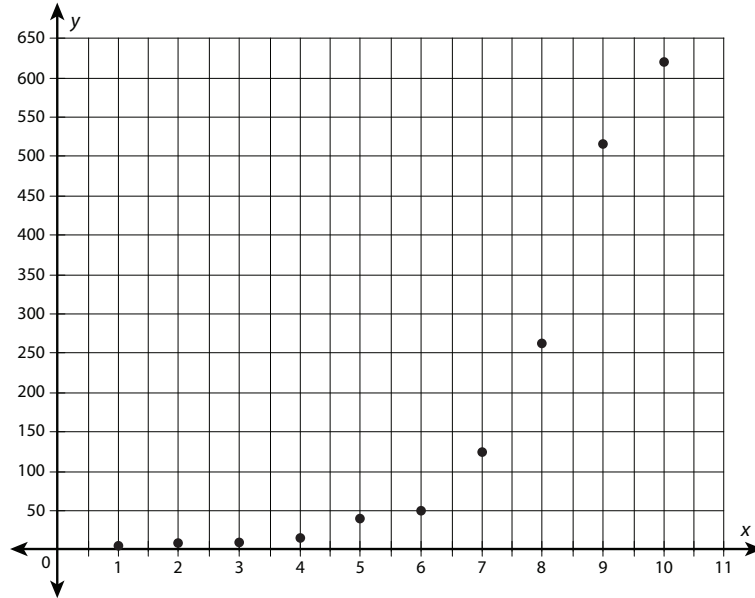
Gender	Preferred car		
	Car 1	Car 2	Car 3
Male	14	13	10
Female	8	15	12

- a. 14
b. 22
c. 35
d. 37

continued

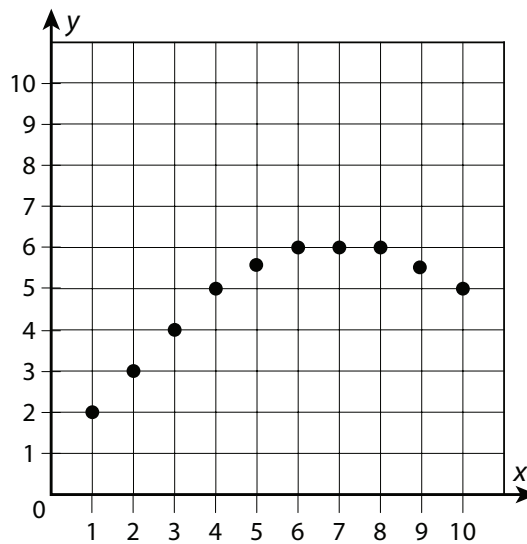
UNIT 6 • DESCRIBING DATA**Lesson 2: Working with Two Variables****Assessment**

3. Which equation could be used to approximate the data in the scatter plot?



- a. $y = 2^x$
- b. $y = 2x$
- c. $y = \frac{1}{2}x$
- d. $y = \left(\frac{1}{2}\right)^x$

4. Which equation could be used to approximate the data in the scatter plot?



- a. $y = -0.12(x - 7)^2 + 6$
- b. $y = -5(0.75)^x + 6$
- c. $y = 0.6x + 1$
- d. none of the above

continued

UNIT 6 • DESCRIBING DATA

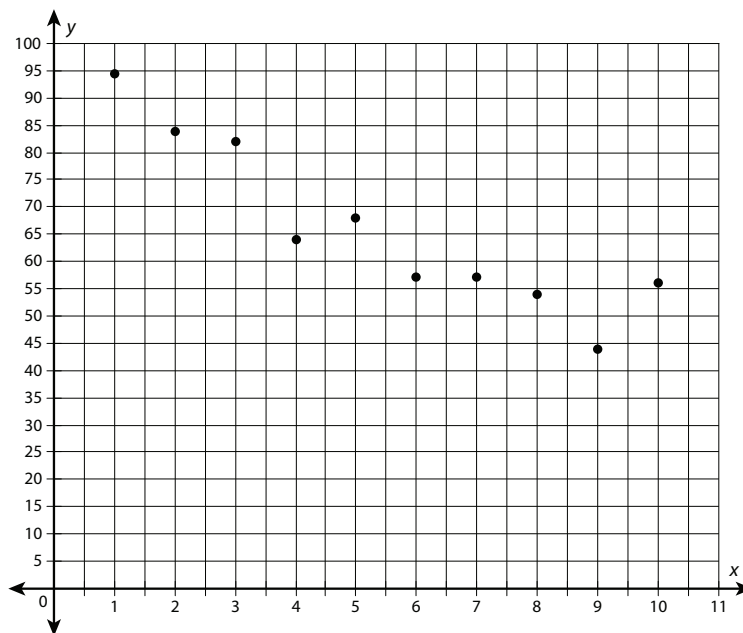
Lesson 2: Working with Two Variables

Assessment

7. Dylan records whether people prefer to drink coffee, tea, water, or orange juice in the morning. He separates the responses by which of three eastern United States regions they live in: the Northeast, the Mid-Atlantic, or the South. What is the conditional frequency of people from the Northeast who prefer coffee, relative to the total number of respondents?

Region	Preferred morning drink			
	Coffee	Tea	Water	Orange juice
Northeast	28	24	10	2
Mid-Atlantic	20	31	7	9
South	15	29	6	12

- a. 0.10
b. 0.15
c. 0.33
d. 0.44
8. Which equation could be used to approximate the data in the scatter plot?



- a. $y = (-5)^x + 93$
b. $y = 5x + 93$
c. $y = 5^x + 93$
d. $y = -5x + 93$

continued

UNIT 6 • DESCRIBING DATA**Lesson 2: Working with Two Variables****Assessment**

Read the given information, then follow the directions to complete problem 11.

11. The following table represents the height above the ground of a finch in flight as time passes.

Time (seconds)	Height (meters)
0	1.5
1	2
2	1.5
3	2
4	3
5	5
6	9

- a. Create a scatter plot of the data.
- b. What function model would best fit the data? Explain.
- c. Which function is a better fit for the data: $y = (x - 3)^2 + 2$ or $y = 2^{x-3} + 1$? Use a graph to support your answer.

UNIT 6 • DESCRIBING DATA**Lesson 3: Interpreting Linear Models****Assessment****Pre-Assessment**

Circle the letter of the best answer.

1. Sam tracks the growth of a plant, and records its height in centimeters each week. He determines that the equation $y = 2.3x + 16$ can be used to estimate the plant's height for any week. Which statement is true based on Sam's equation?
 - a. The plant grows approximately 16 centimeters each week.
 - b. The starting height of the plant is approximately 16 centimeters.
 - c. The starting height of the plant is approximately 2.3 centimeters.
 - d. The plant did not grow during the time Sam tracked its height.

2. Isabella makes deposits to her savings account each month, and she also earns interest. She records the amount of money in her savings account each month, and finds that the equation $y = 218x + 100$ can be used to estimate the dollars in her savings account for any month. Which statement is true based on Isabella's equation?
 - a. She started her account with approximately \$218.
 - b. The amount of money in her account increases by approximately \$100 each month.
 - c. The amount of money in her account increases by approximately \$218 each month.
 - d. Isabella takes approximately \$218 out of her account each month.

continued

UNIT 6 • DESCRIBING DATA

Lesson 3: Interpreting Linear Models

Assessment

Progress Assessment

Circle the letter of the best answer.

- Coach Thomas records her athletes' performances at recent softball games. She uses the information to find an equation to represent the number of times a player should reach first base for any number of at bats. Her equation is $y = 0.27x + 0.04$, where x represents the number of times at bat, and y represents the number of times reaching first base. Which statement is true based on the equation?
 - For each at bat, there is a 27% chance that a player will get on first base.
 - For each at bat, there is a 4% chance that a player will get on first base.
 - For each at bat, there is a 2.7% chance that a player will get on first base.
 - For each at bat, there is a 0.4% chance that a player will get on first base.
- Ella planted tulips around her house. Each day, she tracks the number of blossoming buds. For the 10 days that she tracks the tulips, she finds that the equation $y = 2x + 3$ estimates the number of blossoming buds on any of the days from 1 to 10. Which statement is true based on this equation?
 - Approximately 3 buds blossom each day.
 - Approximately 2 buds blossom each day.
 - The day Ella started tracking blossoming buds, there were approximately 2 blossoming buds.
 - Approximately $\frac{2}{3}$ buds blossom each day.

continued

Name: _____

Date: _____

UNIT 6 • DESCRIBING DATA

Lesson 3: Interpreting Linear Models

Assessment

Read the scenario and use the table to complete problem 11.

Harris observes small birds that migrate to his yard. He tracks the number of birds by noting how many ounces of birdseed are eaten each day, and records his data in a table.

Day	Ounces eaten
1	4
2	5
3	6
4	12
5	11
6	10
7	18
8	12
9	26
10	22

11. Create a scatter plot of the data. Find the correlation coefficient, r , and use the shape of the graph and the correlation coefficient to describe the relationship between the day and the bird population.