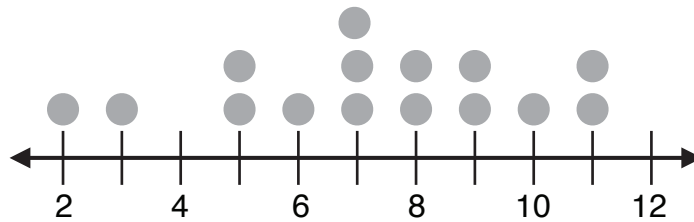


**UNIT 6 • DESCRIBING DATA****Unit Assessment****Assessment****Unit 6 Assessment**

Circle the letter of the best answer.

1. Which data set is represented by the dot plot?



- a. 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12  
 b. 2, 3, 5, 5, 6, 7, 7, 7, 8, 9, 10, 11, 11  
 c. 2, 3, 5, 5, 6, 7, 7, 7, 8, 8, 9, 9, 10, 11, 11  
 d. 2, 3, 4, 4, 4, 7, 7, 7, 8, 8, 9, 9, 10, 11, 11
2. Which statement about the following two data sets is true?  
 Set A: 15, 18, 19, 19, 20, 24, 24, 25, 25, 25, 28, 28, 29, 30  
 Set B: 15, 17, 19, 25, 25, 25, 26, 26, 29
- a. The mean and median are both greater for Set A than for Set B.  
 b. The mean and median are both greater for Set B than for Set A.  
 c. Set A has a higher mean, but Set B has a higher median.  
 d. Set A has a higher median, but Set B has a higher mean.
3. Which points in the data set are outliers?  
 73 73 74 75 75 75 77 77 77 77 78 78 89 90
- a. 73, 73  
 b. 73, 73, 74  
 c. 78, 78, 89, 90  
 d. 89, 90

4. What is the interquartile range of the data set?

16 18 18 19 20 21 23 24 25 26 27 27 27 29 29 29 30

a. 8.5  
 b. 19.5  
 c. 24  
 d. 28

***continued***

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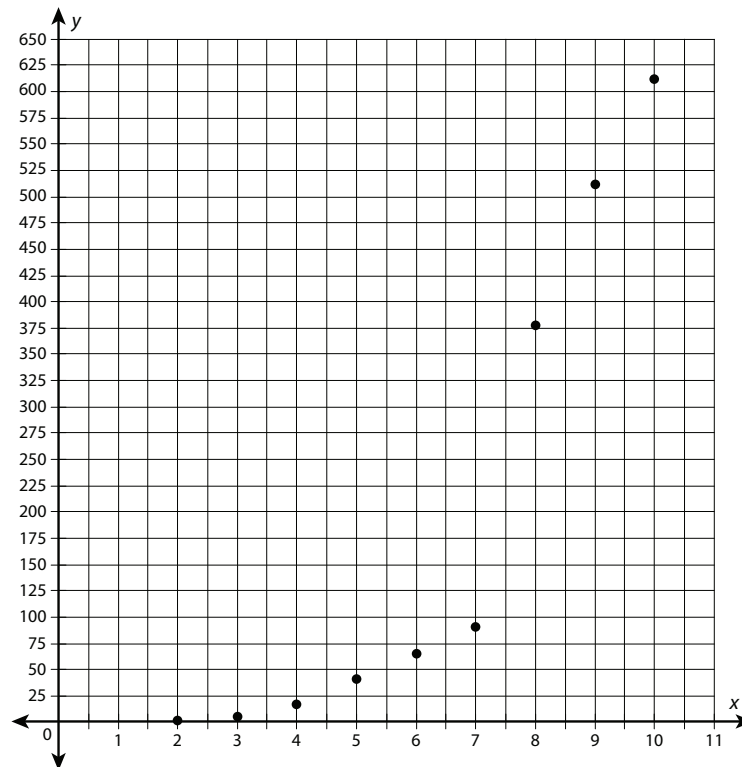
## Assessment

5. Ms. Rosenberg collects information about her students. She records students' favorite movie type in the following table, and separates the responses by age.

Age	Favorite movie genre			
	Comedy	Romantic comedy	Action	Thriller
15 years old	8	14	22	9
16 years old	13	16	18	5

What is the joint frequency of 15-year-olds who prefer action movies?

- a. 8  
b. 14  
c. 18  
d. 22
6. Which function is a good fit for the data in the scatter plot?

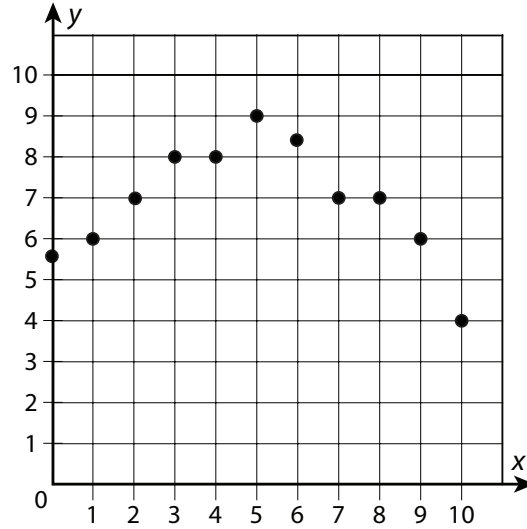


- a.  $y = 2^x$   
b.  $y = 77x - 200$   
c.  $y = 2x - 200$   
d.  $y = 200x - 77$

*continued*

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7. Which function is a good fit for the data in the scatter plot?



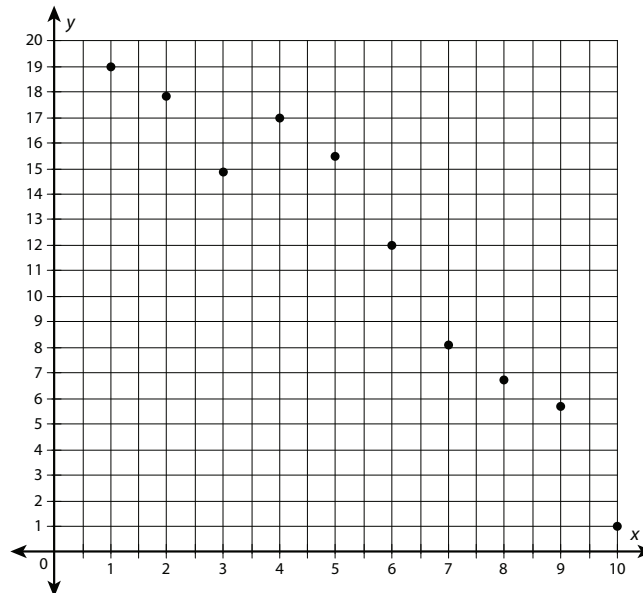
a.  $y = -0.003(2)^x + 7$

c.  $y = -0.2(x - 5)^2 + 9$

b.  $y = -0.02(2)^x + 7$

d.  $y = -2(x - 5)^2 + 9$

8. Which linear function is a good fit for the data in the scatter plot?



a.  $y = 1.9x + 22$

c.  $y = -1.9x - 22$

b.  $y = 1.9x - 22$

d.  $y = -1.9x + 22$

*continued*

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## Assessment

9. A car manufacturer is interested in learning about the amount of money people of different ages spend on a new car. Data regarding customer age and car purchase price are listed in the table.

Customer age	Car price in dollars	Customer age	Car price in dollars
23	25,000	31	30,000
38	35,000	52	44,000
24	25,000	56	47,000
32	31,000	55	47,000
56	47,000	59	50,000
46	40,000	36	34,000
46	41,000	51	44,000
54	46,000	50	43,000
33	31,000		

What is the correlation coefficient,  $r$ , of the data in the table? Is this data an example of causation?

- a.  $r = 0.999$ ; yes
- b.  $r = 0.999$ ; no
- c.  $r = -0.999$ ; yes
- d.  $r = -0.999$ ; no
10. The events  $x$  and  $y$  have a correlation coefficient of  $r = -0.08$ . What is the relationship between  $x$  and  $y$ ?
- a. The events have a strong negative linear correlation.
- b. The events have a strong positive linear correlation.
- c. The events have a weak positive linear correlation.
- d. There is little or no linear correlation.
11. Nolan uses the equation  $y = 7.5x$  to estimate the time it will take him to run between 1 and 5 miles, where  $x$  is the number of miles and  $y$  is the time in minutes. Which statement is true based on the equation?
- a. It takes Nolan approximately 7.5 minutes to run 1 mile.
- b. Nolan runs approximately 7.5 miles in 1 minute.
- c. It takes Nolan approximately 7.5 minutes to run 5 miles.
- d. It takes Nolan approximately 1.5 minutes to run 1 mile.

*continued*



Name:

Date:

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**Assessment**

14. What are the outliers, if any, in the following data set?

93 95 96 98 99 107 113 116 121 121 123 124 125 126 150 163 168

15. What type of function would be a good estimate for the data shown in the scatter plot? Use the shape of the graph to explain your response.

