

Chapter 11 Test Algebra 1

Multiple Choice

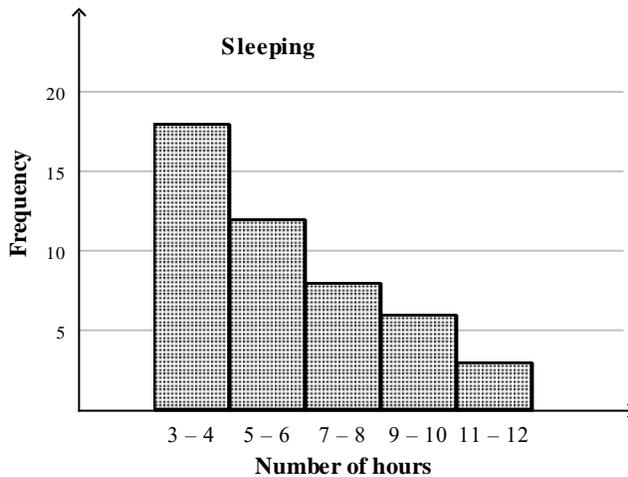
Identify the choice that best completes the statement or answers the question.

1. Which data set is qualitative?
 - a. textures of fabric at a mill
 - b. ages of attendees at a concert
 - c. average daily temperatures of a town
 - d. decibel ranges for pairs of earbuds

Multiple Response

Identify one or more choices that best complete the statement or answer the question.

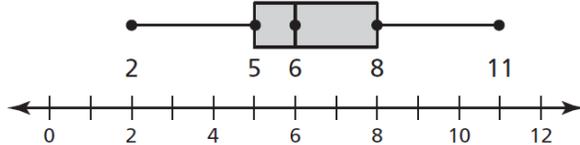
2. The histogram shows the results of a survey that asked people how many hours of sleep they get each night. Which statements are true?



- a. The mean is near the median.
- b. The data are skewed to the right.
- c. The five-number summary is the best measure of variation.
- d. The mean is the best measure of center.

Numeric Response

Use the box-and-whisker plot to find the given measure.



3. least value

4. first quartile
5. median
6. range
7. greatest value
8. third quartile

Matching

Use the two-way table to match each description with its value. Use each value, rounded to the nearest percent, only once.

		Age	
		15-21	35-41
How You Look Up Spelling Words	Online	136	50
	Dictionary	20	66

- | | |
|--------|--------|
| a. 18% | d. 31% |
| b. 43% | e. 57% |
| c. 77% | |
9. percent of 35-41 year olds in the survey that look up spelling words online
 10. percent of 15-21 year olds in the survey
 11. given that a person looks up words in a dictionary, the conditional relative frequency that he or she is 35-41 years old
 12. percent of people in the survey that look up words in a dictionary
 13. given that a person is 35-41 years old, the conditional relative frequency that he or she looks up spelling words online

Short Answer

14. You keep track of the number of algebra problems your teacher assigns for 3 weeks.

Number of Problems Assigned				
20	15	25	12	0
13	17	9	21	11
25	14	16	19	5

- a. Display the data in a histogram using 6 intervals beginning with 0–4.
- b. Describe the shape of the distribution.

c. How would you interpret the data?

15. You conduct a survey that asks 81 students about their favorite past time. The two-way table shows the results of the survey.

	Favorite Past Time	Not Favorite Past Time	Total
Reading	17	24	
Watching TV	21	19	
Total			

- a. Complete the table.
- b. What is the relative frequency of reading being the favorite past time?
- c. What is the relative frequency of watching TV being the favorite past time?

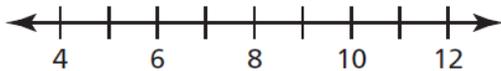
Find the mean, median, and mode of the data set. Which measure of center best represents the data? Explain.

16.

Building Height (feet)		
1250	1525	2175
1400	1400	1650
1550	1350	1400

Make a box-and-whisker plot that represents the data.

17. 11, 8, 4, 8, 5, 7, 9, 10, 8, 9, 8



Find the range and standard deviation of each data set. Then compare your results.

18. Number of students in a class

Female: 12, 15, 11, 12, 17

Male: 10, 15, 14, 8, 11

19. The table shows the prices of eight electronic tablets.

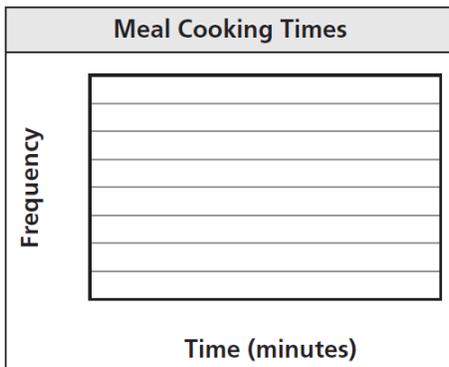
Price (dollars)	188	480	250	151	310	200	295	190
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- Find the mean, median, mode, range, and standard deviation of the prices.
- Identify the outlier. How will it affect the mean, median, and mode?
- Make a box-and-whisker plot that represents the data. Find and interpret the interquartile range of the data. Identify the shape of the distribution.

20. The table shows the times it takes to cook 15 meals.

Time (minutes)				
25	20	27	18	40
65	50	35	35	40
40	58	90	38	20

- Display the data in a histogram using four intervals beginning with 11 – 30.



- Which measures of center and variation best represent the data?

