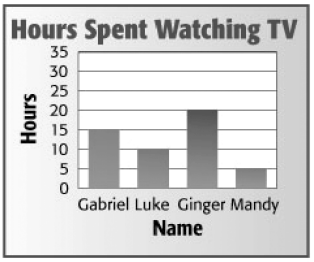
Name:

Chapter 2 - Statistics and Graphs - Practice Test

1. **MULTIPLE CHOICE** Mandy and her friends collected the following data during one week.



Which statement is supported by the graph?

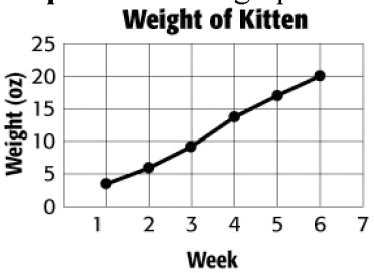
A Gabriel watched TV three times as much as Mandy.
B Luke watched about 15 hours of TV.
C Gabriel watched the most TV.
D Ginger watched twice as much TV as Mandy.

The graph shows that Gabriel watched TV for about 15 hours, while Mandy watched for about 5 hours. 15 is three times as much as 5, so Gabriel watched TV three times as much as Mandy. The correct answer is A.

PETS Use the following information.
The weight of a kitten in ounces for each week since it was born are 4, 7, 9, 13, 17, and 20.

2. Create a line graph of this data.

Step 1 Decide on a scale and interval. The data includes number from 4 to 20. So a scale from 0 to 25 and an interval of 5 is reasonable.
Step 2 Label the horizontal and vertical axes.
Step 3 Draw and connect the points for each weight. Each point shows the weight of the kitten each week since it was born.
Step 4 Label the graph with a title.



3. Make a prediction of the kitten's weight at Week 7.

22 oz

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4. **MULTIPLE CHOICE** Julio collected the following data about the number of movies his classmates saw.

Number of Movies Seen at Theater								
0	4	3	2	0	4	5	2	1
4	6	1	3	7	4	8	10	0

Which measure of the data is represented by 10 movies?

F Mean
G Median
H Mode
J Range

J; First order the data: 0, 0, 0, 1, 1, 2, 2, 3, 3, 4, 4, 4, 4, 5, 6, 7, 8, 10

mean: $0 + 0 + 0 + 1 + 1 + 2 + 2 + 3 + 3 + 4 + 4 + 4 + 4 + 5 + 6 + 7 + 8 + 10/19 = \frac{60}{19} \approx 3$

median: $\frac{3+4}{2} = \frac{7}{2} = 3.5$

mode: 4
range: 10 – 0 = 10
The range is represented by 10 movies.

FOOTBALL Use data in the table below

Number of Years the Leading Lifetime NFL Passers Played in NFL				
6	15	15	5	6
5	13	17	6	4
10	15	11	10	9
11	6	8	18	19

Source: *The World Almanac*

5. Make a stem-and-leaf plot of the data.

Step 1 Order the data from least to greatest
4, 5, 5, 6, 6, 6, 6, 8, 9, 10, 10, 11, 11, 13, 15, 15, 15 ,17, 18, 19
Step 2 Use the tens digits to form the stems and the units digits to form the leaves.
Step 3 Include a key that explains the stems and leaves.
Step 4 Label the plot with a title.

Years the Leading Lifetime NFL Passers Played in the NFL	
Stem	**Leaf**
0	4 5 5 6 6 6 6 8 9
1	0 0 1 1 3 5 5 5 7 8
	9 *1| 5 = 15 years*

6. What is the greatest number of years a leading lifetime NFL passer has played in the NFL?

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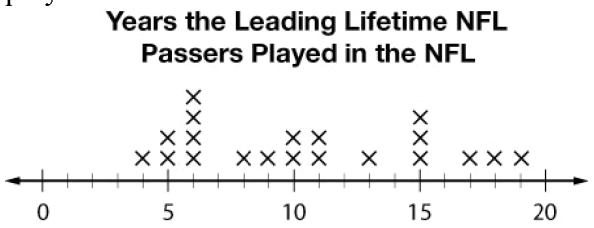
7. Make a line plot of the data.

Step 1 Draw a number line. The data includes numbers from 4 to 19. So a scale from 0 to 20 is reasonable.
Step 2 Put an × above the number that represents the number of years played in the NFL for each player. Add a title.



8. What is the difference between the greatest and least number of years a leading lifetime NFL passer has played in the NFL?

19 – 4 = 15 years

9. Write two additional sentences that analyze the data.

Sample answer: No leading lifetime NFL passer played 16 years. Only one leading lifetime NFL passer played 13 years.

Find the mean, median, mode, and range for each set of data.

10. Birthday money each year ($): 67, 68, 103, 65, 80, 54, 53

First order the data: 53, 54, 65, 67, 68, 80, 103

$$\text{mean}: \frac{53+54+65+67+68+80+103}{7}$$

$$= \frac{490}{7} \text{ or } 70$$

Median: 67
There is no mode.
range: 103 – 53 = 50

11. Bowling scores: 232, 200, 242, 242

First order the data: 200, 232, 242, 242

$$\text{mean}: \frac{200+232+242+242}{4}$$

$$= \frac{916}{4} \text{ or } 229$$

$$\text{median}: \frac{232+242}{2}$$

$$= \frac{474}{2} \text{ or } 237$$

mode: 242
range:242 – 200 = 42

Select an appropriate type of display for data gathered about each situation.

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12. the number of digital cable subscribers each year since 2000

The data will compare digital cable subscribers over a period of time, so a line graph will be best.

13. the number of pets owned by each student in a classroom

Sample answer: The data will include many data values which most likely will repeat, so a line plot will be best.

Write an integer to represent each piece of data.

14. He withdrew $75 from an ATM.

–75 represents a withdrawal of $75

15. The snow level rose 4 inches.

+4 or 4 represents the snow level rising 4 inches

16. Graph –3 and its opposite on a number line.