Practice 2   Median, Mode, and Range

Find the median, mode, and range.

Example

4, 6, 5, 6, 8, 8, 10, 8

Find the median.

4, 5, 6, (6, 8,) 8, 8, 10

Arrange the numbers in order from least to greatest. The middle number or the mean of the two middle numbers is the median.

Since there are two middle numbers, 6 and 8, find the mean of the two numbers.

The median of the data set is $\frac{6+8}{2} = \frac{14}{2} = 7$.

Find the mode.

4, 5, 6, 6, (8,)(8,)(8,) 10

The number that appears most often is the mode. There can be more than one mode. If all the numbers appear the same number of times, there is no mode.

The mode of the data set is 8.

Find the range.

4, 5, 6, 6, 8, 8, 8, 10

Range = 10 − 4
**   = 6**

The difference between the greatest and the least number is the range.

The range of the data set is 6.

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

1.   50, 52, 58, 50, 47, 43, 52, 60, 49, 52

Median:

Mode:

Range:

2.   15 in., 18 in., 12 in., 14 in., 30 in., 15 in., 15 in.

Median:

Mode:

Range:

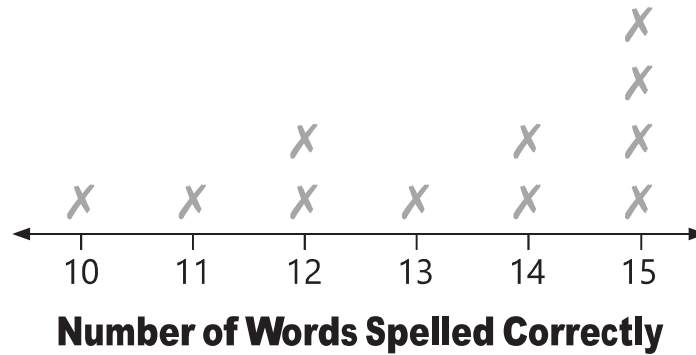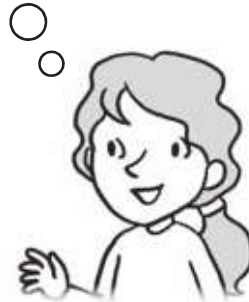**3.**   9 lb, 11 lb, 14 lb, 20 lb, 14 lb, 20 lb, 14 lb, 20 lb

Median:

Mode:

Range:

Example

The line plot shows the number of words spelled correctly by each contestant in a spelling bee. Each ✗ represents one contestant.

```
                                              ✗
                                              ✗
                        ✗             ✗       ✗
        ✗       ✗       ✗       ✗     ✗       ✗
    ◄───┼───────┼───────┼───────┼──────┼───────┼───►
       10      11      12      13     14      15
```

Number of Words Spelled Correctly

> An ✗ above 15 on the number line represents a contestant who spelled 15 words correctly.

Complete. Use the data in the line plot.

_____11_____ contestants took part in the spelling bee.

The median number of words spelled correctly is _____14_____.

The number of contestants who spelled the greatest

number of words correctly is _____4_____.

The mode of the set of data is _____15_____ words.

The difference between the greatest and the least number of words spelled

correctly is _____5_____.

Make a line plot to show the data.

The table shows the number of bull's eyes each player scored out of 10 shots in a dart competition.

Results of Dart Competition

Number of Bull's Eyes	5	6	7	8	9	10
Number of Players	1	2	3	4	0	1

Complete. Use the data in your line plot.

4. The median number of bull's eyes scored is _____ .

5. There are _____ players altogether.

6. The number of bull's eyes that was scored the most is _____ .

7. The range of the set of data is _____ .

8. _____ players scored 7 bull's eyes, and the winner scored

    _____ bull's eyes.

Complete the table based on the information given.

A number cube has six faces numbered 1 to 6. John tossed two number cubes several times and added the numbers each time.

Sum of the Number Cubes

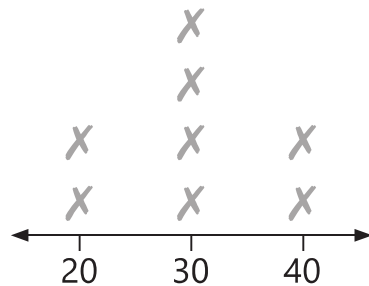| Total	Tally	Number of Times
2	/	
3		
4	//	
5	/	
6	//	
7	////	
8	//	
9	/	
10		
11	/	
12		

Complete. Use the data in the table.

9. John threw the two number cubes _____ times altogether.

10. Make a line plot to show the total for each toss.

11. The median of the set of data is _____ .

12. The mode of the set of data is _____ .

13. The range of the set of data is _____ .

Find the mean of each set of data.

Example

Haley made a line plot to show the number of points she scored in a computer math game over three weeks.

First, find the total number of points she scored.

```
            X
            X
    X   X   X
    X   X   X
 ◄──┼───┼───┼──►
   20  30  40
```

Number of Points Scored in Week 1

20 points 3 ____2____ times 5 ____40____

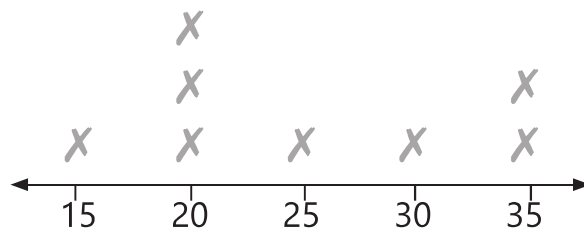30 points 3 ____4____ times 5 ____120____

40 points 3 ____2____ times 5 ____80____

Mean 5 $\dfrac{\text{Total number of points scored}}{\text{Number of times played}}$

5 $\dfrac{40 + 120 + 80}{2 + 4 + 2} = \dfrac{240}{8} = 30$

Haley's mean score for each game in Week 1 is ____30____ points.

14.

Number of Points Scored in Week 2

15 points 3 _____ time(s) 5 _____

20 points 3 _____ time(s) 5 _____

25 points 3 _____ time(s) 5 _____

30 points 3 _____ time(s) 5 _____

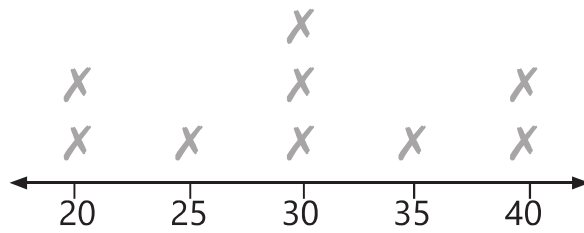35 points 3 _____ time(s) 5 _____

Mean 5 _____

5 _____ 5 _____

Haley's mean score for each game in Week 2 is _____ points.

Find the mean of the set of data.

15.

Number of Points Scored in Week 3

20 points 3 ⎯⎯⎯⎯⎯ time(s) 5 ⎯⎯⎯⎯⎯

25 points 3 ⎯⎯⎯⎯⎯ time(s) 5 ⎯⎯⎯⎯⎯

30 points 3 ⎯⎯⎯⎯⎯ time(s) 5 ⎯⎯⎯⎯⎯

35 points 3 ⎯⎯⎯⎯⎯ time(s) 5 ⎯⎯⎯⎯⎯

40 points 3 ⎯⎯⎯⎯⎯ time(s) 5 ⎯⎯⎯⎯⎯

Mean 5 ⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯

5 ⎯⎯⎯⎯⎯

5 ⎯⎯⎯⎯⎯

Haley's mean score for each game in Week 3 is ⎯⎯⎯⎯⎯ points.

16. Compare the line plots for Weeks 2 and 3. Can you tell which data set has a greater mean just by looking at the line plots? What part of the line plot makes you think that?