

Lesson 11.4 Measures of Central Tendency

The **mean** is the average of a set of numbers. To find the mean, add all the numbers and divide by the number of addends.

The **median** is the middle number of a set of numbers. If there are two middle numbers, the median is the average of the two.

The **mode** is the number that appears most often in a set of numbers.

The **range** is the difference between the greatest and the least number of the set.

Example: 12, 15, 18, 23, 8, 10, and 12

Mean: $12 + 15 + 18 + 23 + 8 + 10 + 12 = 98$ $\frac{98}{7} = 14$

To find the median, arrange the numbers in order. 8, 10, 12, 12, 15, 18, 23

Median: 12 Mode: 12 Range: $23 - 8 = 15$

Find the median of 8, 6, 5, 7, 2, and 10. 2, 5, 6, 7, 8, 10

The middle numbers are 6 and 7. Median is $\frac{6+7}{2} = 6\frac{1}{2}$.

Find the mean, median, mode, and range of each set of numbers. Show your work.

- | a | b |
|-------------------------------|----------------------------|
| 1. 32, 35, 25, 43, 43 | 8, 12, 23, 12, 15 |
| mean _____ | mean _____ |
| median _____ | median _____ |
| mode _____ | mode _____ |
| range _____ | range _____ |
| 2. 10, 18, 12, 14, 12, 12 | 17, 15, 15, 28, 20, 26 |
| mean _____ | mean _____ |
| median _____ | median _____ |
| mode _____ | mode _____ |
| range _____ | range _____ |
| 3. 52, 61, 79, 78, 56, 79, 71 | 37, 50, 67, 83, 34, 49, 37 |
| mean _____ | mean _____ |
| median _____ | median _____ |
| mode _____ | mode _____ |
| range _____ | range _____ |

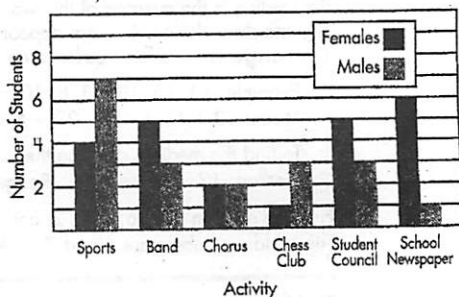
Lesson 11.1 Reading Bar Graphs

The bar graph shows the after-school activities of males and females in Mrs. Martin's class.

How many females participate in the Student Council? 5

How many males participate in the Student Council? 3

How many more females than males participate in the Student Council? 2

After-School Activities in Mrs. Martin's Class

Use the bar graph above to answer the following questions.

- Which activity has the same number of females as males? _____
- What is the most popular activity for males? _____
- What is the most popular activity for females? _____
- How many more females than males are in the band? _____
- How many females are in either band or chorus? _____
- How many more males than females participate in sports? _____
- How many males participate in either band or sports? _____
- Which activity has the least number of males? _____
- What is the total number of participants in sports? _____
- Which activity has the greatest difference between females and males? _____