

Unit 10 Objective 4 Remediation

Find the Median of Data

The **MEDIAN** of a data set is the middle number in the set when the elements are placed in numerical order.

How to Find the Mode:

- Put the data in order from least to greatest
- Find the middle of the data:
 - o If there is an odd number of elements → median will be the middle number
 - o If there is an even number of elements → median will be the average of the two middle numbers

Examples:

1.) The following are student test scores on a recent test given in Mrs. Brodbeck's math class.

86 82 93 76 68 81 82 90 75 74

Find the median of the test scores.

Step 1 – Order the data from least to greatest

68 74 75 76 81 82 82 86 90 93

Step 2 – Start at the ends, start crossing off numbers at each end until you have reached the middle:

~~68~~ ~~74~~ ~~75~~ ~~76~~ (81 82) ~~82~~ ~~86~~ ~~90~~ ~~93~~

Since there is an even number of elements, we must find the average of the two middle numbers:

$$\frac{81 + 82}{2} = 81.5$$

The median of the data is 81.5

2.) Find the median of the following data set:

3 8 4 12 16 5 9 13 20

Step 1 – Order the data from least to greatest:

3 4 5 8 9 12 13 16 20

Step 2 - Start at the ends, start crossing off numbers at each end until you have reached the middle:

~~3~~ ~~4~~ ~~5~~ ~~8~~ (9) ~~12~~ ~~13~~ ~~16~~ ~~20~~

Since there is an odd number of elements, the median is the middle number.

The median of the data is 9

Practice

- 1.) The daily sales of a convenience store in a week:

\$834 \$1099 \$765 \$930 \$900 \$950

Find the median of the daily sales. Median = _____

- 2.) The ACT scores of 8 students:

18 30 22 20 28 20 22 22

Find the median of the ACT scores of the student. Median = _____

- 3.) Number of points scored in last season's football games:

0 14 3 14 20 21 28 10 17

Find the median of the scores. Median = _____

- 4.) Gallons of gas put into a car per week for the past few weeks:

11.5 13.2 14.6 7.3 14.9 12.4 11.1 9.8 10.8

Find the median of the gallons of gas for the weeks. Median = _____

- 5.) The chart below shows the number of accidents by month.

| Accidents by Month | | | | | | | | | | | |
|--------------------|------|------|------|-----|------|------|------|------|------|------|------|
| Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| 3 | 6 | 1 | 0 | 2 | 6 | 2 | 3 | 3 | 4 | 1 | 2 |

Find the median number of accidents each month. Median = _____