

Median, Mode, and Range

The median, mode, and range are each numbers that describe a set of data.

Here is Eduardo's survey of how many books his friends read last month.

What are the median, mode, and range of Eduardo's survey?

Book Reading	
Friend	Number of books read
Jean	2
Raul	3
Sally	8
Jonathan	5
Haley	6
Kristen	3
Owen	1

Median: The median is the middle number in a set of data. To find it:

1. Arrange the data in order from least to greatest.
2. Locate the middle number.

1, 2, 3, 3, 5, 6, 8

↑ middle number = 3

The median number of books read is 3.

Mode: The mode is the data value that occurs most often. To find it:

1. List the data. 1, 2, 3, 3, 5, 6, 8
2. Find the number that occurs most. 3

The mode of the books read by Eduardo's friends is 3 books.

Range: The range is the difference between the greatest and least values.

To find it:

1. Identify the greatest and least values. 8 and 1
2. Subtract the least from the greatest value. $8 - 1 = 7$

The range of the books read by Eduardo's friends is 7 books.

1. Find the median of this data set: 12, 18, 25, 32, 67.
2. Find the mode of this data set: 123, 345, 654, 123, 452, 185.
3. Find the range of this data set: 24, 32, 38, 31, 61, 35, 31.

25

123

37

Name _____

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1. Find the range of this data set: 225, 342, 288, 552, 263.
2. Find the median of this data set: 476, 234, 355, 765, 470.
3. Find the mode of this data set:
16, 7, 8, 5, 16, 7, 8, 4, 7, 8, 16, 7.
4. Find the range of this data set:
64, 76, 46, 88, 88, 43, 99, 50, 55.
5. **Reasoning** Would the mode change if a 76 were added to the data in Exercise 4?

327

470

7

56

Yes. The mode is now 88. With another 76, the modes would be 76 and 88.

The table below gives the math test scores for Mrs. Jung's fifth-grade class.

76	54	92	88	76	88
75	93	92	68	88	76
76	88	80	70	88	72
Test Scores					

6. Find the mean of the data. 80
7. Find the mode of the data. 88
8. Find the median of the data. 78
9. What is the range of the data set? 39
10. Find the range of this data set: 247, 366, 785, 998.
A 998 **B** 781 **C** 751 **D** 538
11. **Explain It** Will a set of data always have a mode?
Explain your answer.

No: if every item is different, there is no mode.