LESSON MAKER PRO

Find the Balance

Use data to find what is typical and how much values vary.

GRADE 5 · 5.D.1.1

5.D.1.1 "Find the measures of central tendency (i.e., mean, median, mode) and range of a set of data. Understand that the mean is a "leveling out" or central balance point of the data."

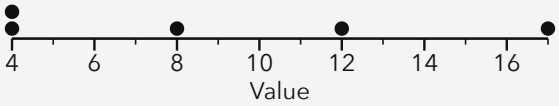
NAME _____ DATE _____

THE BIG IDEA

To find the mean, add the values and divide by how many there are. Think of the mean as a balance point: values above it balance values below it. To find the median, order the values and choose the middle; the mode appears most often, and the range is greatest minus least.

WORKED EXAMPLE

Find the mean, median, mode, and range of the data.



1. Add: 4 + 4 + 8 + 12 + 17 = 45.
2. Mean: 45 / 5 = 9.
3. The middle value is 8; 4 appears most often.
4. Range: 17 - 4 = 13.

Answer: Mean: 9; median: 8; mode: 4; range: 13.

PRACTICE 4 problems

1 Find the mean: 1, 3, 3, 13.

ANSWER _____

2 Find the median and mode: 6, 6, 9, 10, 11.

ANSWER _____

3 Find the range: 15, 19, 19, 21.

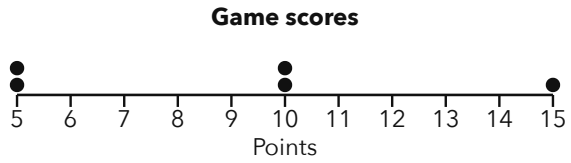
ANSWER _____

4 The mean of 1, 9, 10, and ___ is 9. Find the missing value.

ANSWER _____

APPLY IT Show your work

1 The dot plot shows five scores from a video game. Find the mean and range.



ANSWER _____

2 Five friends practiced a dance for 3, 3, 5, 7, and 7 minutes. Find the median and all modes.

WORK SPACE

ANSWER _____

CHALLENGE One step up

Four players scored 3, 6, 10, and 11 points. What must a fifth player score to make the mean 9? Explain how the scores balance around 9.

WORK SPACE AND ANSWER

ANSWER KEY

Find the Balance

GRADE 5 · 5.D.1.1

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find the mean: 1, 3, 3, 13.	**5**
2	Find the median and mode: 6, 6, 9, 10, 11.	**Median: 9; mode: 6.**
3	Find the range: 15, 19, 19, 21.	**6**
4	The mean of 1, 9, 10, and ___ is 9. Find the missing value.	**16**

PART 2 · APPLY IT

1. **Mean: 9 points; range: 10 points.** The scores total 45, so the mean is 45 / 5 = 9. The range is 15 - 5 = 10.
2. **Median: 5 minutes; modes: 3 and 7 minutes.** The middle value is 5. Both 3 and 7 appear twice, more often than any other value.

CHALLENGE

15 points. The scores 3 and 6 are a total of 9 below 9, while 10 and 11 are a total of 3 above 9. A score of 15 adds the other 6 above 9.

Accept 3 and 7 in either order for the two modes. For the challenge, also accept a correct total-based explanation: five scores with a mean of 9 must total 45, and the first four total 30.