Averages: Mean, Median, Mode and Range

Year 10–11 Maths · Years 10–11 · NCEA Level 1 · About 20 minutes · 8 questions

Name _____ Date _____ Score / 8

WHAT YOU WILL PRACTISE

- Calculate the mean, median, mode and range of a data set
- Find a missing value from a given mean
- Choose the most suitable average and give a reason

WORKED EXAMPLE

Find the mean and the range of 5, 8, 8, 11, 13.

1. Add the values: 5 + 8 + 8 + 11 + 13 = 45.
2. Divide by how many values there are: 45 ÷ 5 = 9, so the mean is 9.
3. Subtract the smallest value from the largest: 13 − 5 = 8, so the range is 8.

Answer: Mean 9, range 8

Questions

Show your working in the space under each question.

1. Find the mean of 4, 7, 9, 10, 15

2. Find the median of 3, 8, 5, 12, 7

3. Find the mode of 2, 5, 3, 5, 7, 5, 2

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4. Find the range of 14, 9, 22, 17, 11

5. Find the median of 6, 2, 9, 4, 10, 7

6. The mean of five numbers is 8. Four of the numbers are 6, 9, 10 and 3. Find the fifth number.

7. The mean of four numbers is 12. A fifth number, 22, is added. Find the new mean.

8. Six test scores are 12, 15, 15, 18, 20 and 40. Which represents the scores better, the mean or the median? Give a reason.

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Answers: Averages: Mean, Median, Mode and Range

Mark your own work, then go back to any question you got wrong before reading the tutor tip.

Q	QUESTION	ANSWER
1	Find the mean of 4, 7, 9, 10, 15	**9**
2	Find the median of 3, 8, 5, 12, 7	**7**
3	Find the mode of 2, 5, 3, 5, 7, 5, 2	**5**
4	Find the range of 14, 9, 22, 17, 11	**13**
5	Find the median of 6, 2, 9, 4, 10, 7	**6.5**
6	The mean of five numbers is 8. Four of the numbers are 6, 9, 10 and 3. Find the fifth number.	**12**
7	The mean of four numbers is 12. A fifth number, 22, is added. Find the new mean.	**14**
8	Six test scores are 12, 15, 15, 18, 20 and 40. Which represents the scores better, the mean or the median? Give a reason.	**The median (16.5). The score of 40 is an outlier that pulls the mean up to 20.**

TUTOR TIP

Put the numbers in order before finding the median. With an even number of values, the median is halfway between the middle two.

Stuck on a question? Work through it live with a tutor.

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