



# Calculating averages and range

Mana Maths

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## Te reo Māori terms



**toharite**

mean/average

[Open in Te Aka](#)

**takawaenga**

median

[Open in Te Aka](#)

**awhe**

range

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# Calculating averages and range — Foundation

1. Calculate the mean of:  
4, 6, 8, 10, 12.
2. Calculate the median  
of: 3, 7, 9, 11, 15.
3. Find the mode of: 2,  
3, 3, 5, 6, 3, 7.
4. Calculate the range of:  
12, 15, 18, 20, 25.
5. Calculate the mean of:  
5, 10, 15, 20, 25.
6. Calculate the median  
of: 8, 12, 16, 20, 24.
7. Find the mode of: 4,  
4, 5, 6, 7, 4, 8.
8. Calculate the range of:  
30, 35, 40, 45, 50.
9. Calculate the mean of:  
7, 14, 21, 28, 35.
10. Calculate the median  
of: 10, 20, 30, 40, 50.
11. Find the mode of: 1,  
2, 2, 3, 4, 2, 5.
12. Calculate the range of:  
22, 24, 26, 28, 30.

# Calculating averages and range — Proficient

1. Calculate the mean of: 12, 15, 10, 18, 10.
2. A dataset has 6 values: 1, 5, 8, 10, 12, 14. Calculate the median.
3. The mean of five numbers is 10. If four of the numbers are 8, 12, 15, and 6, what is the value of the fifth number?
4. Find the mean, median, mode, and range of: 4, 7, 9, 7, 12, 7, 15.
5. Calculate the mean of: 23, 27, 31, 35, 39.
6. A dataset has values: 5, 8, 12, 15, 18, 21, 24. Calculate the median.
7. The mean of six numbers is 15. If five numbers are 12, 14, 16, 18, and 20, find the sixth number.
8. Find the mean, median, mode, and range of: 10, 12, 14, 12, 18, 12, 22.
9. Calculate the mean of: 42, 46, 50, 54, 58.

**10.** A dataset has values:  
3, 6, 9, 12, 15, 18, 21,  
24. Calculate the median.

**11.** The mean of seven numbers is 12. If six numbers are 8, 10, 12, 14, 16, and 18, find the seventh number.

**12.** Find the mean, median, mode, and range of: 15, 18, 21, 18, 24, 18, 27.

# Calculating averages and range — Excellence

- 1.** The mean of five numbers is 12. Four numbers are 8, 10, 14, and 16. Find the fifth number and explain your method.
- 2.** A dataset has values: 5, 7, 9, 11, 13, 15, 17, 19. Calculate the median and explain why the median is a better measure of centre than the mean for this dataset.
- 3.** Find the mean, median, mode, and range of: 12, 15, 18, 15, 21, 15, 24, 27. Which measure best represents the typical value? Explain.
- 4.** The range of a dataset is 20. The smallest value is 15. What is the largest value? If the mean is 25, is this possible? Explain.
- 5.** Create a dataset of 6 numbers where the mean is 10, the median is 9, and the range is 12.
- 6.** A student calculates the mean of 4, 8, 12, 16 as 12. Explain the error and calculate the correct mean.

- 7.** The mean of six numbers is 18. Five numbers are 12, 15, 18, 21, 24. Find the sixth number and explain how the range changes if the sixth number is 30 instead.
- 8.** Compare two datasets:  
Set A: 5, 10, 15, 20, 25;  
Set B: 12, 13, 14, 15, 16. Which has a larger range? Which has a higher mean? Explain.
- 9.** A dataset has no mode. What does this tell you about the data? Give an example.
- 10.** The median of seven numbers is 14. List a possible set of numbers and explain how changing one number affects the median.
- 11.** Explain why the mean might be misleading if a dataset has one very large or very small value. Give an example.
- 12.** Create a word problem that requires calculating mean, median, mode, and range to solve. Then solve it.