# Year 6 · Statistics: Making Sense of Data

Name: _____ Date: _____

Hi! This sheet helps you find the mean (average) and the range of number data, and read time-series data collected over days. Take your time and show your working.

## Warm-up

1. Find the mean of these numbers: 4, 6, 8.

2. Find the range of these numbers: 3, 9, 5, 2.

3. Find the mean of these test scores: 10, 20, 30, 40.

4. Find the range of these temperatures (°C): 18, 22, 15, 20.

## Practice

5. Aria measured the mass of a bag of carrots each day for 5 days: 1000 g, 990 g, 985 g, 975 g, 970 g. What is the range of the masses?

6. Using Aria's carrot masses (1000, 990, 985, 975, 970 g), find the mean mass over the 5 days.

7. The Avondale Markets recorded rainfall (mm) for one week: 2, 0, 5, 8, 3, 6, 4. Find the mean daily rainfall.

8. Using the same rainfall data (2, 0, 5, 8, 3, 6, 4), find the range.

9. Tane counted the number of buses passing his house each morning for 5 days: 6, 8, 7, 5, 9. What is the mean number of buses per day?

10. Mere saved money over 4 weeks: $12, $15, $9, $16. Find both the mean weekly saving and the range.

## Challenge

11. Over 5 days the temperature at Cornwall Park was recorded: 16°C, 18°C, 17°C, 19°C, and one missing day. The mean over the 5 days was 18°C. What was the missing temperature?

12. A shop weighed a kilogram of bananas each day for 6 days: 1000 g, 995 g, 985 g, 980 g, 975 g, 965 g. Find the mean and the range, then explain what the numbers tell you about the bananas over time.

## Answer key (for parents and tutors)

1. Find the mean of these numbers: 4, 6, 8.
   **Add them: 4 + 6 + 8 = 18. There are 3 numbers, so divide: 18 ÷ 3 = 6. The mean is 6.**
2. Find the range of these numbers: 3, 9, 5, 2.
   **The highest value is 9 and the lowest is 2. Range = highest – lowest = 9 – 2 = 7. The range is 7.**
3. Find the mean of these test scores: 10, 20, 30, 40.
   **Add them: 10 + 20 + 30 + 40 = 100. There are 4 scores, so 100 ÷ 4 = 25. The mean is 25.**
4. Find the range of these temperatures (°C): 18, 22, 15, 20.
   **Highest = 22, lowest = 15. Range = 22 – 15 = 7. The range is 7°C.**
5. Aria measured the mass of a bag of carrots each day for 5 days: 1000 g, 990 g, 985 g, 975 g, 970 g. What is the range of the masses?
   **Highest = 1000 g, lowest = 970 g. Range = 1000 – 970 = 30 g. The range is 30 g.**
6. Using Aria's carrot masses (1000, 990, 985, 975, 970 g), find the mean mass over the 5 days.
   **Add them: 1000 + 990 + 985 + 975 + 970 = 4920 g. Divide by 5 days: 4920 ÷ 5 = 984 g. The mean mass is 984 g.**
7. The Avondale Markets recorded rainfall (mm) for one week: 2, 0, 5, 8, 3, 6, 4. Find the mean daily rainfall.
   **Add them: 2 + 0 + 5 + 8 + 3 + 6 + 4 = 28 mm. There are 7 days, so 28 ÷ 7 = 4 mm. The mean daily rainfall is 4 mm.**
8. Using the same rainfall data (2, 0, 5, 8, 3, 6, 4), find the range.
   **Highest = 8 mm, lowest = 0 mm. Range = 8 – 0 = 8 mm. The range is 8 mm.**
9. Tane counted the number of buses passing his house each morning for 5 days: 6, 8, 7, 5, 9. What is the mean number of buses per day?
   **Add them: 6 + 8 + 7 + 5 + 9 = 35. Divide by 5 days: 35 ÷ 5 = 7. The mean is 7 buses per day.**
10. Mere saved money over 4 weeks: $12, $15, $9, $16. Find both the mean weekly saving and the range.
    **Mean: 12 + 15 + 9 + 16 = 52, then 52 ÷ 4 = $13. Range: highest $16 – lowest $9 = $7. The mean is $13 and the range is $7.**
11. Over 5 days the temperature at Cornwall Park was recorded: 16°C, 18°C, 17°C, 19°C, and one missing day. The mean over the 5 days was 18°C. What was the missing temperature?
    **If the mean of 5 values is 18, the total must be 18 × 5 = 90°C. The four known values add to 16 + 18 + 17 + 19 = 70. The missing value = 90 – 70 = 20°C. The missing temperature was 20°C.**
12. A shop weighed a kilogram of bananas each day for 6 days: 1000 g, 995 g, 985 g, 980 g, 975 g, 965 g. Find the mean and the range, then explain what the numbers tell you about the bananas over time.
    **Mean: 1000 + 995 + 985 + 980 + 975 + 965 = 5900 g, then 5900 ÷ 6 = 983.33 g (about 983 g). Range: 1000 – 965 = 35 g. The masses go down a little each day, so this time-series data shows the bananas are slowly losing mass (drying out) as the days pass. The range of 35 g tells us the difference between the heaviest and lightest days is small.**