Year 8 · Statistics: Making Sense of Data

Name: _____ Date: _____

Hi! This sheet helps you read graphs and tables like a real statistician, finding the middle, the spread, the shape, and spotting when a graph is trying to trick you. Take your time and show your thinking.

Warm-up

1. Find the median of these scores: 4, 7, 9, 2, 6.

2. Find the range of these heights (cm): 12, 18, 5, 22, 9.

3. A dot plot has a long tail stretching to the right and most dots bunched on the left. Is it positively or negatively skewed?

4. Find the median of this even-sized set: 3, 8, 10, 15.

Practice

5. Ten students recorded how many minutes they read one night: 20, 25, 30, 15, 40, 35, 25, 30, 45, 20. Find the median and the range.

6. Aroha's netball team scored these goals over 7 games: 12, 15, 9, 14, 11, 13, 10. Find the median number of goals and the range, then write one sentence describing the team's scoring.

7. A newspaper histogram shows house sale prices in Avondale. Most bars are tall on the left (lower prices) and a few short bars stretch far to the right (very expensive houses). Describe the shape of the data and say where the middle of the data lies compared with the highest prices.

8. Weekly water use (litres) for 7 households was: 22, 24, 23, 25, 21, 24, 78. Identify the outlier by eye, then find the range with and without it. Which range better describes the typical spread?

9. A social media post shows a bar graph titled 'Best Sports at Our School' but the vertical axis has no numbers or label. Explain why this graph cannot be interpreted accurately, and name one thing that should be added.

10. Mele records daily coffee sales at her Avondale café over one week: Mon 40, Tue 42, Wed 45, Thu 48, Fri 60, Sat 75, Sun 30. Describe the trend across the week and identify the most and least popular days.

Challenge

11. Two classes sat the same test (out of 75). Class A: 55, 60, 62, 65, 68, 70, 72. Class B: 40, 63, 64, 66, 67, 69, 71. Find the median and range for each class. Identify any outlier, and explain which class performed more consistently once the outlier is considered.

12. A company advert shows a bar graph of 'Customer Satisfaction' where Brand X's bar looks about twice as tall as Brand Y's. On closer look, the vertical axis starts at 90% (not 0%): Brand X = 96% and Brand Y = 94%. Explain how the graph is misleading and how it should be drawn to be fair.