Year 8 · Statistics: Making Sense of Data

Name: _____ Date: _____

Kia ora! This sheet helps you sort out the different types of variables and work out the mean, median, mode and range. Take your time and sort your numbers carefully before you start.

Warm-up

1. Decide whether each variable is categorical, discrete numerical, or continuous numerical: (a) favourite ice cream flavour, (b) number of pets in a house, (c) the height of a student in centimetres.

2. Find the mean of these test scores: 6, 8, 7, 9, 10.

3. Find the median of: 12, 5, 9, 3, 7.

4. Find the range of these temperatures (°C): 14, 21, 18, 9, 25.

Practice

5. Find the mode of these shoe sizes recorded at Vertex Academy: 7, 8, 8, 6, 9, 8, 7, 10.

6. For the data set 4, 11, 6, 4, 9, 8, find (a) the mean, (b) the median, (c) the range.

7. Mila measured the length of everyone's right foot in her whānau (in cm): 22, 24, 24, 26, 29. Her statistical question is 'Are our feet the same length?' Find the median foot length and the range, then answer her question.

8. At a Saturday market in Avondale, a stall sold these numbers of pies each hour: 15, 22, 18, 22, 13. Find the mean number of pies sold per hour and the mode.

9. Tane wants to answer 'How long do students take to walk to school?' He records these times in minutes: 8, 15, 10, 12, 20, 15. (a) Is walking time a discrete or continuous variable? (b) Find the mean and (c) the range.

10. A netball team scored these goals over 7 games: 24, 30, 28, 24, 35, 24, 31. Find the mean, median, mode and range.

Challenge

11. A group of 5 students has a mean age of 12 years. A sixth student joins and the new mean becomes 12.5 years. How old is the sixth student?

12. A data set of five whole numbers has a mode of 6, a median of 6, a mean of 7, and a range of 8. Find a possible set of five numbers.