

The mode and the range (most common, and the spread)

WHAT THIS LESSON TEACHES

The mode is the value that appears most often in a set of data — on a bar chart it is the tallest bar. The range is the biggest value take away the smallest value.

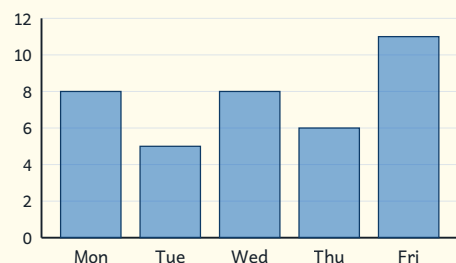
→ In 6, 4, 9, 4, 7, 2, 4 the mode is 4 because it appears most often.

→ Shoe sizes from 2 up to 7 give a range of $7 \text{ minus } 2 = 5$.

MODEL THIS ON THE BOARD

MODE AND RANGE

- 1 The bar chart shows books borrowed: Mon 8, Tue 5, Wed 8, Thu 6, Fri 11.
- 2 The two bars of the same height are both 8, so the mode is 8.
- 3 Biggest value is 11 and smallest is 5. Range = $11 - 5 = 6$.



DISCUSSION STARTER

REFLECT When is the mode more useful to know, and when does the range tell you more?

ANSWER KEY

b) 7

c) 6

Q1: 4

Q2: mode 7, range 8

a) Never — The mode is the most common value, not the biggest.

b) Sometimes — Some sets have one mode; some are bimodal; some have no mode.

c) Always — Range measures spread: largest – smallest.

d) Always — Largest and smallest match, so the difference is 0.

EXTENSION SHEET · STRETCH ANSWERS

S1: 151

S2: 157

S3: 11

S4: 9

S5: 12

Investigation: Mode and range hunt — open-ended; scan pupils' working for valid solution paths rather than a single answer.