Day 54 **C Tier 10-a-day: Model Solutions**

1 The mode

Here are the numbers of books read by some students.
12 0 7 11 9 7 8
Write down the mode.

The mode is the value that appears most often
7 appears 2 times
Answer: 7

2 Choosing units

Which unit is best for measuring the length of a long river?
Choose from: mm, cm, m, km

Rivers are hundreds of kilometres long
So the best unit is km
Answer: km

3 Writing expressions

A pen costs m pence.
Write an expression for the cost, in pence, of 3 pens.

3 pens cost 3 × m pence
Answer: 3m

4 Adding decimals

Work out 4.36 + 3.70.

Line up the decimal points
4.36 + 3.70 = 8.06
Answer: 8.06

5 24-hour clock

Write 13:05 using the 12-hour clock.
Use am or pm in your answer.

Times after 12:00 are pm: subtract 12 from the hour, 13 − 12 = 1
13:05 = 1:05 pm
Answer: 1:05 pm

6 Simplifying expressions

Simplify 5b + 6b + 3y + 6y

Collect the b terms: 5 + 6 = 11b
Collect the y terms: 3 + 6 = 9y
Answer: 11b + 9y

7 Perimeter on a square grid

The diagram shows a shape drawn on a square grid.
Each square has a side of length 1 m.
Work out the perimeter of the shape.

Count the length of each side going round the shape.
2 + 1 + 3 + 4 + 5 + 3 = 18
Answer: 18 m

8 Sampling

Leah wants to find out how many people eat fast food.
Leah asks people outside a fast food restaurant.
Give a reason why this sample may be biased.

They are more likely to eat fast food than other people
Answer: They are more likely to eat fast food than other people

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9 Division in context

Each minibus holds 40 people.
122 people need a lift.
How many minibuses are needed?

122 ÷ 40 = 3 remainder 2
The extra people need another minibus
Answer: 4

10 Substitution

Work out the value of $y^2 + 5$ when y = 6.

$y^2 = 6 \times 6 = 36$
36 + 5 = 41
Answer: 41