Day 107 **C Tier 10-a-day: Model Solutions**

1 Place value

Write down the value of the digit 5 in the number 2150.

The digit 5 is in the tens column
5 × 10 = 50
Answer: 50

2 Lines of symmetry

Write down the number of lines of symmetry of
(a) a rectangle
(b) a square

(a) A rectangle has 2 lines of symmetry
(b) A square has 4 lines of symmetry
Answer: (a) 2 (b) 4

3 The median of an even number of values

Here are the shoe sizes of some students.
3 6 7 4
Work out the median.

Put the numbers in order: 3 4 6 7
The middle two numbers are 4 and 6
Halfway between them: (4 + 6) ÷ 2 = 5
Answer: 5

4 Perimeter of a rectangle

A rectangular field is 14 m long and 3 m wide.
Work out the perimeter.

Add up all four sides
14 + 3 + 14 + 3 = 34
Answer: 34 m

5 Formulae in words

Here is a rule for the height of a sunflower.
Height (cm) = 7 × number of weeks + 15
Work out the height of the sunflower after 2 weeks.

Height (cm) = 7 × 2 + 15
= 14 + 15 = 29
Answer: 29 cm

6 Stem and leaf diagrams

The stem and leaf diagram shows the lengths, in cm, of pieces of ribbon.
Write down the largest value.

The last row has the largest stem and its last leaf is the largest
43
Answer: 43

7 Simplifying expressions

Simplify 2x + 7 + 7x

Letters: 2x + 7x = 9x
Numbers: 7 on its own
Answer: 9x + 7

Day 107 **C Tier 10-a-day: Model Solutions**

8 Volume and surface area of a cube

A cube has sides of length 7 cm.
(a) Work out the volume of the cube.
(b) Work out the total surface area of the cube.

(a) Volume = 7 × 7 × 7 = 343
(b) Each face is a square of area 7 × 7 = 49
A cube has 6 faces: 6 × 49 = 294
Answer: (a) 343 cm^3 (b) 294 cm^2

9 Number puzzles

I think of a number.
I subtract 2.
My answer is 9.
What number did I think of?

Work backwards: add 2
9 + 2 = 11
Answer: 11

10 Solving equations

Solve $\frac{w}{2} = 7$

$\frac{w}{2}$ means w ÷ 2, so multiply both sides by 2
w = 7 × 2 = 14
Answer: w = 14