Day 27 **C Tier 10-a-day: Model Solutions**

1 Names of polygons

How many sides does a pentagon have?

A pentagon has 5 sides

Answer: 5

2 Writing expressions

Simplify c × 2

Write the number first, then the letters in alphabetical order, with no × signs

Answer: 2c

3 Money: change

Jack buys lunch for £10.30.
Jack pays with a £20 note.
How much change does Jack get?

Change = £20 − £10.30
2000p − 1030p = £9.70

Answer: £9.70

4 Solving equations

Solve 6m = 24

6m means 6 × m, so divide both sides by 6
m = 24 ÷ 6 = 4

Answer: m = 4

5 Equivalent fractions

Find the missing number.

$\frac{2}{5} = \frac{4}{?}$

2 × 2 = 4, so multiply the bottom by 2 as well
5 × 2 = 10

Answer: 10

6 Map scales

On a map, 1 cm represents 100 km.
Two towns are 4 cm apart on the map.
Work out the real distance between the towns.

4 × 100 = 400

Answer: 400 km

7 Area on a square grid

The diagram shows a shape drawn on a square grid.
Each square has an area of 1 m^2.
Work out the area of the shape.

Count the squares in the shape.
Split into two rectangles: 3 × 3 = 9 and 4 × 4 = 16
9 + 16 = 25

Answer: 25 m^2

8 Inequalities

n is a whole number.
Write down all the possible values of n when
$4 \leq n \leq 8$

n is at least 4 and at most 8
The smallest whole number is 4 and the largest is 8

Answer: 4, 5, 6, 7, 8

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9 Multiples: smallest common

Find the smallest number that is a multiple of both 2 and 11.

Multiples of 2: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22
Multiples of 11: 11, 22
22 is in both lists
Answer: 22

10 Probability of not getting a colour

A bag contains 4 blue beads, 3 black beads and 3 white beads.
One is taken at random.
Write down the probability that it is not white.

Number that are not white: 4 + 3 = 7
Total: 10

Probability = $\frac{7}{10}$

Answer: $\frac{7}{10}$