Day 93 **C Tier 10-a-day: Model Solutions**

1 Reading a table

The table shows the pets owned by some students.
How many more students for Fish than for Rabbit?

Fish: 10 Rabbit: 5
10 − 5 = 5
Answer: 5

2 Angles round a point

The diagram shows 4 angles round a point.
Work out the size of angle b.
The diagram is not drawn accurately.

Angles round a point add up to 360°
55 + 105 + 95 = 255
360 − 255 = 105
Answer: b = 105°

3 Number puzzles

I think of a number.
I multiply it by 3.
My answer is 15.
What number did I think of?

Work backwards: divide by 3
15 ÷ 3 = 5
Answer: 5

4 Rates

A machine makes 4 bottles each hour.
How many bottles does it make in 2 hours?

4 × 2 = 8
Answer: 8 bottles

5 Writing expressions

Ella thinks of a number, y.
Ella multiplies the number by 4 and then adds 5.
Write an expression for the answer.

Multiply by 4: 4y
Then add 5: 4y + 5
Answer: 4y + 5

6 Fractions, decimals and percentages

Write 0.7 as a percentage.

Multiply by 100
0.7 × 100 = 70
Answer: 70%

7 Volume of a cuboid

The diagram shows a cuboid.
Work out the volume of the cuboid.
The diagram is not drawn accurately.

Volume = length × width × height
7 × 5 × 3
7 × 5 = 35, then 35 × 3 = 105
Answer: 105 m^3

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8 Percentages of amounts

Work out 10% of 230 kg.

10% = $\frac{1}{10}$, so divide by 10

230 ÷ 10 = 23

Answer: 23 kg

9 The nth term

The nth term of a sequence is 6n − 5.
Write down the first three terms of the sequence.

Put n = 1, 2, 3 into 6n − 5

6 × 1 − 5 = 1

6 × 2 − 5 = 7

6 × 3 − 5 = 13

Answer: 1, 7, 13

10 Perimeter from area

A rectangular garden has an area of 72 m^2.
Its width is 6 m.
Work out the perimeter of the garden.

Length = area ÷ width = 72 ÷ 6 = 12

Perimeter = 12 + 6 + 12 + 6 = 36

Answer: 36 m