Day 189 **C Tier 10-a-day: Model Solutions**

1 Number puzzles

Hugo thinks of a number.
Hugo adds 15.
The answer is 41.
What number did Hugo think of?

Subtract 15 from 41
41 − 15 = 26
Answer: 26

2 Missing numbers

Find the missing number.
? ÷ 4 = 8

8 × 4 = 32
Answer: 32

3 Perimeter of a rectangle

A rectangular poster is 8 cm long and 3 cm wide.
Work out the perimeter.

Add up all four sides
8 + 3 + 8 + 3 = 22
Answer: 22 cm

4 Tables of values

Complete the table of values for y = 3x.

When x = 2: y = 3 × 2 = 6
When x = 3: y = 3 × 3 = 9
Answer: x = 2: y = 6; x = 3: y = 9

5 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°
110 + 55 + 85 = 250
360 − 250 = 110
Answer: b = 110°

6 Proportion

4 notebooks cost £2.80.
Work out the cost of 2 notebooks.

Cost of one notebook: 280p ÷ 4 = 70p
70p × 2 = 140p
140p = £1.40
Answer: £1.40

7 Missing side from area

A rectangular field has an area of 18 cm^2.
Its length is 9 cm.
Work out its width.

Area = length × width
18 = 9 × width
width = 18 ÷ 9 = 2
Answer: 2 cm

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8 Timetables

The table shows the times of two buses.
How many minutes does Bus 2 take to go from School to Market?

09:05 − 08:50
Count on from 08:50 to 09:05
Answer: 15 minutes

9 The nth term

The nth term of a sequence is 2n + 1.
Write down the first three terms of the sequence.

Put n = 1, 2, 3 into 2n + 1
2 × 1 + 1 = 3
2 × 2 + 1 = 5
2 × 3 + 1 = 7
Answer: 3, 5, 7

10 Sharing in a ratio

Amir and Noah share 20 stickers in the ratio 1 : 3.
Work out how much each person gets.

Number of parts = 1 + 3 = 4
One part = 20 ÷ 4 = 5
Amir: 1 × 5 = 5 Noah: 3 × 5 = 15
Answer: Amir 5, Noah 15