Day 315 **C Tier 10-a-day: Model Solutions**

1 Place value

Write down the value of the digit 1 in the number 53,417.

The digit 1 is in the tens column
1 × 10 = 10
Answer: 10

2 Number puzzles

Leah thinks of a number.
Leah adds 12.
The answer is 29.
What number did Leah think of?

Subtract 12 from 29
29 − 12 = 17
Answer: 17

3 Faces, edges and vertices

How many edges does a pentagonal prism have?

A pentagonal prism: 5 edges on each end plus 5 joining them: 5 + 5 + 5 = 15
Answer: 15

4 Map scales

On a map, 1 cm represents 50 km.
Two towns are 4 cm apart on the map.
Work out the real distance between the towns.

4 × 50 = 200
Answer: 200 km

5 Prime numbers

Write down the prime number in this list.
9, 33, 17, 39

A prime number has exactly two factors, 1 and itself
9 = 3 × 3
33 = 3 × 11
39 = 3 × 13
Answer: 17

6 Time from distance and speed

A bus travels 320 km at 40 km/h.
How long does the journey take?

Time = distance ÷ speed
320 ÷ 40 = 8
Answer: 8 hours

7 Reflection on a grid

The point P is drawn on the grid.
P is reflected in the line y = 3.
Write down the coordinates of the image of P.

P is (6, 1)
P is 2 squares below the line, so the image is 2 squares above
y-coordinate: 3 + 2 = 5
Answer: (6, 5)

Day 315 **C Tier 10-a-day: Model Solutions**

8 Tables of values

Complete the table of values for y = 6x.

When x = 1: y = 6 × 1 = 6
When x = 5: y = 6 × 5 = 30
Answer: x = 1: y = 6; x = 5: y = 30

9 Finding a missing value from the mean

The mean of three numbers is 6.
Two of the numbers are 11 and 5.
Work out the other number.

Total of all the numbers: 6 × 3 = 18
Total of those given: 11 + 5 = 16
18 − 16 = 2
Answer: 2

10 Substitution into formulae

Use the formula C = 5p + 2q to work out the value of C when p = 3 and q = 4.

C = 5 × 3 + 2 × 4
= 15 + 8 = 23
Answer: C = 23