Day 312 **C Tier 10-a-day: Model Solutions**

1 Place value

Write down the value of the digit 5 in the number 50,321.

The digit 5 is in the ten thousands column
5 × 10000 = 50000
Answer: 50,000

2 Reading a clock

Write down the time shown on the clock.

The minute hand points to 11, which is 11 × 5 = 55 minutes past, and the hour hand has passed the 7
The time is 7:55
Answer: 7:55

3 Collecting like terms

Simplify 6b − 3b

All the terms are in b, so just add or subtract the numbers in front of b
Answer: 3b

4 Sharing in a ratio

Liam and Sam share 40 sweets in the ratio 1 : 4.
Work out how much each person gets.

Number of parts = 1 + 4 = 5
One part = 40 ÷ 5 = 8
Liam: 1 × 8 = 8 Sam: 4 × 8 = 32
Answer: Liam 8, Sam 32

5 Number sequences

Here is a number sequence.
47, 45, 43, 41, ...
Write down the next two numbers.

The sequence goes down by 2 each time
41 − 2 = 39, 39 − 2 = 37
Answer: 39, 37

6 Coordinates

(a) Write down the coordinates of point G.
(b) Which point has coordinates (3, −1)?

(a) G is right 2 and up 2
(b) Go right 3 and down 1: this is point V
Answer: (a) (2, 2) (b) V

7 Timetables

The table shows the times of two buses.
How many minutes does Bus 1 take to go from Derby to Leeds?

08:40 − 08:20
Count on from 08:20 to 08:40
Answer: 20 minutes

8 Finding a missing value from the mean

The mean of three numbers is 6.
Two of the numbers are 1 and 4.
Work out the other number.

Total of all the numbers: 6 × 3 = 18
Total of those given: 1 + 4 = 5
18 − 5 = 13
Answer: 13

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9 Simplifying expressions

Simplify 4x + 4 − 3x

Letters: 4x − 3x = x
Numbers: 4 on its own
Answer: x + 4

10 Reflecting a point

The point P has coordinates (1, −6).
P is reflected in the x-axis.
Write down the coordinates of the image of P.

The x-coordinate stays the same and the y-coordinate changes sign
Answer: (1, 6)