Day 351 **C Tier 10-a-day: Model Solutions**

1 Which expression

Which of these means 3 added to t?

3t, $\frac{t}{3}$, t + 3, t^2

3 added to t is written t + 3

Answer: t + 3

2 Tally charts

The tally chart shows the pets owned by some students.
How many more students for Bird than for Rabbit?

Bird: 12 Rabbit: 5

12 − 5 = 7

Answer: 7

3 Function machines

Here is a function machine.
Work out the output when the input is 6.

6 + 3 = 9

9 + 2 = 11

Answer: 11

4 Number sequences

Here is a number sequence.
2, 5, 8, 11, ...
Write down the next two numbers.

The sequence goes up by 3 each time

11 + 3 = 14, 14 + 3 = 17

Answer: 14, 17

5 Substitution

Work out the value of 7k + 1 when k = 2.

7k = 7 × 2 = 14

14 + 1 = 15

Answer: 15

6 Translating a point

The point A has coordinates (1, −3).
A is moved 5 right and 5 up.
Write down the coordinates of the new point.

x-coordinate: 1 + 5 = 6

y-coordinate: −3 + 5 = 2

Answer: (6, 2)

7 Number puzzles

I think of a number.
I add 4.
My answer is 7.
What number did I think of?

Work backwards: subtract 4

7 − 4 = 3

Answer: 3

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8 Perimeter of a rectangle

A rectangular field is 12 m long and 10 m wide.
Work out the perimeter.

Add up all four sides
12 + 10 + 12 + 10 = 44
Answer: 44 m

9 Ordering decimals

Write these numbers in order, starting with the smallest.
0.75, 0.71, 0.65, 0.8

Write each with the same number of decimal places
0.65, 0.71, 0.75, 0.80
Answer: 0.65, 0.71, 0.75, 0.8

10 Finding a missing value from the mean

The mean of four numbers is 10.
Three of the numbers are 10, 6 and 13.
Work out the other number.

Total of all the numbers: 10 × 4 = 40
Total of those given: 10 + 6 + 13 = 29
40 − 29 = 11
Answer: 11