Day 65 **C Tier 10-a-day: Model Solutions**

1 Probability words

Choose a word from the list to describe the probability of the event.
A fair coin is flipped. It lands on tails.
impossible, unlikely, even chance, likely, certain

Heads and tails are equally likely
So the event is even chance
Answer: even chance

2 Time conversions

Change 6 weeks into days.

1 weeks = 7 days, so multiply by 7: 6 × 7 = 42
Answer: 42 days

3 Sequences

Here is a sequence with one number missing.
12, 23, 34, ?, 56
Work out the missing number.

The terms go up by 11 each time
34 + 11 = 45
Answer: 45

4 Fractions of amounts

Work out $\frac{1}{3}$ of 9 kg.

Divide by 3
9 ÷ 3 = 3
Answer: 3 kg

5 Reflecting a point

The point P has coordinates (3, −2).
P is reflected in the y-axis.
Write down the coordinates of the image of P.

The y-coordinate stays the same and the x-coordinate changes sign
Answer: (−3, −2)

6 Counting outcomes

A café has 5 T-shirts and 4 pairs of shorts.
An outfit is one T-shirt and one pair of shorts.
How many different choices are there?

5 × 4 = 20
Answer: 20

7 Equations of lines

A straight line passes through the points
(2, 2), (4, 2), (7, 2)
Write down the equation of the line.

Every point has y-coordinate 2, so the line is horizontal
Answer: y = 2

8 Completing a table

The table shows the favourite sport of 40 students.
Work out the number of students for Cricket.

Add the known numbers: 6 + 15 + 5 = 26
40 − 26 = 14
Answer: 14

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9 Substitution

Work out the value of 3(m + 2) when m = 8.

Brackets first: 8 + 2 = 10
3 × 10 = 30
Answer: 30

10 Division in context

Each van holds 30 people.
72 people need a lift.
How many vans are needed?

72 ÷ 30 = 2 remainder 12
The extra people need another van
Answer: 3