Day 95 **C Tier 10-a-day: Model Solutions**

1 Types of angle

Write down the type of each angle.
Choose from: acute, right, obtuse, reflex.
(a) 25°
(b) 100°

(a) 25° is less than 90°, so it is acute
(b) 100° is between 90° and 180°, so it is obtuse
Answer: (a) acute (b) obtuse

2 Timetables

The table shows part of a bus timetable.
Priya arrives at Park at 08:52.
What is the time of the next bus from Park?

Look along the Park row for the first time after 08:52
The next bus is at 09:00
Answer: 09:00

3 Addition

Work out 599 + 300.

Add the hundreds, tens and units
599 + 300 = 899
Answer: 899

4 Estimating measurements

Which is the best estimate for the height of a house?
8 cm 80 m 8 m 8 km

A two-storey house is a few metres tall
The best estimate is 8 m
Answer: 8 m

5 Probability of an event not happening

The probability that it rains tomorrow is 0.5.
Work out the probability that this does not happen.

P(not) = 1 − P(event)
1 − 0.5 = 0.5
Answer: 0.5

6 Function machines

Here is a function machine.
The output is 25.
Work out the input.

Work backwards using the opposite operations
25 − 9 = 16
16 − 10 = 6
Answer: 6

7 Reflecting a point

The point P has coordinates (−5, 5).
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: (−5, −5)

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8 Simplifying fractions

Write $\frac{5}{10}$ in its simplest form.

Divide the top and bottom by 5

$\frac{5}{10} = \frac{1}{2}$

Answer: $\frac{1}{2}$

9 Substitution into formulae

Use the formula S = 3m − 3n to work out the value of S when m = 5 and n = 2.

S = 3 × 5 − 3 × 2

= 15 − 6 = 9

Answer: S = 9

10 Average speed

A train travels 150 miles in 5 hours.
Work out its average speed.

Speed = distance ÷ time

150 ÷ 5 = 30

Answer: 30 mph