Day 152 **C Tier 10-a-day: Model Solutions**

1 Ordering numbers

Write these numbers in order, starting with the smallest.
544, 257, 580, 905, 785

Compare the hundreds digits first, then the tens
257, 544, 580, 785, 905
Answer: 257, 544, 580, 785, 905

2 Which expression

Which of these means 6 added to m?

m^2, m + 6, $\frac{m}{6}$, 6m

6 added to m is written m + 6
Answer: m + 6

3 Perimeter and area of a square

A square picture has sides of length 3 m.
(a) Work out its perimeter.
(b) Work out its area.

(a) A square has 4 equal sides: 4 × 3 = 12
(b) Area = side × side: 3 × 3 = 9
Answer: (a) 12 m (b) 9 m^2

4 The median of an even number of values

Here are the shoe sizes of some students.
5 3 7 9 4 9
Work out the median.

Put the numbers in order: 3 4 5 7 9 9
The middle two numbers are 5 and 7
Halfway between them: (5 + 7) ÷ 2 = 6
Answer: 6

5 Equivalent fractions

Find the missing number.

$\frac{3}{8} = \frac{?}{40}$

8 × 5 = 40, so multiply the top by 5 as well
3 × 5 = 15
Answer: 15

6 24-hour clock

Write 4:35 am using the 24-hour clock.

am times stay the same, with a zero in front if needed
4:35 am = 04:35
Answer: 04:35

7 Reading a straight-line graph

The graph shows the cost of fabric.
Use the graph to find the cost of 2 m of fabric.

Go up from 2 on the horizontal axis to the line, then across
Cost = £4
Answer: £4

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8 Pattern sequences

The diagram shows the first three patterns in a sequence made by Max.
Each pattern is made from dots.
How many dots are in Pattern 5?

The patterns have 1, 3, 6 dots
Each pattern has one more row than the last: add 1, then 2, then 3, ...
Counting on: 1, 3, 6, 10, 15
Answer: 15

9 Probability of not getting a colour

A bag contains 6 white beads, 3 blue beads and 1 green beads.
One is taken at random.
Write down the probability that it is not green.

Number that are not green: 6 + 3 = 9
Total: 10
Probability = $\frac{9}{10}$
Answer: $\mathbf{\frac{9}{10}}$

10 Estimation

Estimate the value of 48 + 56 by rounding each number to the nearest 10.

48 rounds to 50 and 56 rounds to 60
50 + 60 = 110
Answer: 110