Day 58 **C Tier 10-a-day: Model Solutions**

1 Solving equations

Solve $y - 5 = 12$

Add 5 to both sides
$y = 12 + 5 = 17$
Answer: $y = 17$

2 24-hour clock

Write 23:50 using am or pm.

Subtract 12 from the hour for times after 12:00
Answer: 11:50 pm

3 Reading a scale

The diagram shows part of a measuring scale.
Write down the reading shown by the arrow.

The labelled marks go up in 100. There are 4 small steps between labelled marks, so each small step is $100 \div 4 = 25$.
The arrow is 3 small steps after 200.
$200 + 3 \times 25 = 275$
Answer: 275 mm

4 Rounding

Write 228 to the nearest ten.

Look at the units digit, which is 8
8 is 5 or more, so round up
Answer: 230

5 Reading a pie chart

52 children were asked about their favourite animal.
The pie chart shows the results.
How many children chose Cat?

The Cat sector is a quarter of the pie chart
$52 \div 4 = 13$
Answer: 13

6 Ordering negative numbers

Write these numbers in order, starting with the largest.
5, 2, −1, −2, 4

Use a number line: negative numbers are smaller the further they are from 0
Answer: 5, 4, 2, −1, −2

7 Enlargement

A square has sides of length 6 cm.
It is enlarged by scale factor 5.
Work out the length of a side of the enlarged square.

Multiply the side by the scale factor
$6 \times 5 = 30$
Answer: 30 cm

8 Equations of lines

A straight line passes through the points
(3, 1), (5, 1), (8, 1)
Write down the equation of the line.

Every point has y-coordinate 1, so the line is horizontal
Answer: $y = 1$

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9 Finding a missing value from the mean

The mean of five numbers is 12.
Four of the numbers are 12, 7, 23 and 1.
Work out the other number.

Total of all the numbers: 12 × 5 = 60
Total of those given: 12 + 7 + 23 + 1 = 43
60 − 43 = 17
Answer: 17

10 Perimeter of a square from its area

A square lawn has an area of 36 m^2.
Work out the perimeter of the lawn.

Side × side = 36, so the side is 6 m (because 6 × 6 = 36)
Perimeter = 4 × 6 = 24
Answer: 24 m