Day 7 **C Tier 10-a-day: Model Solutions**

1 Substitution

Work out the value of $\frac{a}{5}$ when a = 25.

$\frac{a}{5}$ means a ÷ 5

25 ÷ 5 = 5

Answer: 5

2 Missing numbers

Find the missing number.

? ÷ 7 = 10

10 × 7 = 70

Answer: 70

3 Sequences

Here is a sequence with one number missing.

5, ?, 11, 14, 17

Work out the missing number.

The terms go up by 3 each time

5 + 3 = 8

Answer: 8

4 Map scales

On a map, 1 cm represents 50 km.

Two towns are 250 km apart in real life.

How far apart are they on the map?

1 cm represents 50 km

250 ÷ 50 = 5

Answer: 5 cm

5 Fractions of a group

Out of 8 people at a party, 2 are children.

What fraction of the people are children? Give your answer in its simplest form.

$\frac{2}{8}$

Divide top and bottom by 2: $\frac{1}{4}$

Answer: $\frac{1}{4}$

6 Percentages of amounts

Work out 10% of 270 kg.

10% = $\frac{1}{10}$, so divide by 10

270 ÷ 10 = 27

Answer: 27 kg

7 Reading a pie chart

48 children were asked about their favourite animal.

The pie chart shows the results.

How many children chose Bird?

The Bird sector is a quarter of the pie chart

48 ÷ 4 = 12

Answer: 12

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8 Money: wages

Priya earns £8 for each hour of work.
Priya works for 8 hours.
How much does Priya earn?

£8 × 8 = £64
Answer: £64

9 Missing side from area

A rectangular rug has an area of 24 m^2.
Its length is 6 m.
Work out its width.

Area = length × width
24 = 6 × width
width = 24 ÷ 6 = 4
Answer: 4 m

10 The nth term

The nth term of a sequence is 3n + 2.
Work out the 6th term of the sequence.

Put n = 6 into 3n + 2
3 × 6 + 2 = 20
Answer: 20