Day 77 **C Tier 10-a-day: Model Solutions**

1 Time conversions

Change 14 days into weeks.

7 days = 1 weeks, so divide by 7: 14 ÷ 7 = 2

Answer: 2 weeks

2 Substitution

Work out the value of m − 3 when m = 10.

10 − 3 = 7

Answer: 7

3 The mean

Here are the marks in a test.

12 6 3

Work out the mean.

Add up the values: 12 + 6 + 3 = 21

Divide by 3: 21 ÷ 3 = 7

Answer: 7

4 Cost from area

A rectangular patio is 9 m long and 6 m wide.

Paving costs £12 per m^2.

Work out the cost of covering the patio.

Area = 9 × 6 = 54 m^2

Cost = 54 × £12 = £648

Answer: £648

5 Missing numbers

Find the missing number.

63 − ? = 11

63 − 11 = 52

Answer: 52

6 Sharing in a ratio

Ben and Priya share 40 sweets in the ratio 1 : 4.

Work out how much each person gets.

Number of parts = 1 + 4 = 5

One part = 40 ÷ 5 = 8

Ben: 1 × 8 = 8 Priya: 4 × 8 = 32

Answer: Ben 8, Priya 32

7 Area of a rectangle

The diagram shows a rectangle.

Work out the area of the rectangle.

The diagram is not drawn accurately.

Area = length × width

12 × 10 = 120

Answer: 120 cm^2

8 Sampling

Ella wants to find out how much exercise people take.

Ella asks people leaving a gym.

Give a reason why this sample may be biased.

People at a gym are more likely to exercise a lot

Answer: People at a gym are more likely to exercise a lot

Day 77 **C Tier 10-a-day: Model Solutions**

9 Division in context

Each minibus holds 30 people.
92 people need a lift.
How many minibuses are needed?

92 ÷ 30 = 3 remainder 2
The extra people need another minibus
Answer: 4

10 Substitution into formulae

Use the formula S = 5p + 5q to work out the value of S when p = 8 and q = 6.

S = 5 × 8 + 5 × 6
= 40 + 30 = 70
Answer: S = 70