Day 40 **C Tier 10-a-day: Model Solutions**

1 Multiplication

Work out 37 × 6.

30 × 6 = 180 and 7 × 6 = 42
180 + 42 = 222
Answer: 222

2 Tally charts

The tally chart shows the pets owned by some students.
Write down the frequency for Dog.

Each group of 5 is 5 and any extra lines are added on
Dog: 2 groups of 5 and 3 = 5 × 2 + 3 = 13
Answer: 13

3 Place value

Write down the value of the digit 9 in the number 9432.

The digit 9 is in the thousands column
9 × 1000 = 9000
Answer: 9000

4 Solving equations

Solve $\frac{w}{3} = 9$

$\frac{w}{3}$ means w ÷ 3, so multiply both sides by 3
w = 9 × 3 = 27
Answer: w = 27

5 Distance from speed and time

A runner travels at 20 km/h for 5 hours.
How far does it travel?

Distance = speed × time
20 × 5 = 100
Answer: 100 km

6 Area of a triangle

The diagram shows a triangle.
Work out the area of the triangle.
The diagram is not drawn accurately.

Area of a triangle = base × height ÷ 2
4 × 3 = 12
12 ÷ 2 = 6
Answer: 6 m^2

7 Simplifying expressions

Simplify 6c + 5 − 3c

Letters: 6c − 3c = 3c
Numbers: 5 on its own
Answer: 3c + 5

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8 Shaded area

The diagram shows a rectangle with a smaller rectangle cut out of it.
Work out the area of the shaded part.
The diagram is not drawn accurately.

Big rectangle: $9 \times 6 = 54$
Small rectangle: $5 \times 4 = 20$
Shaded area: $54 - 20 = 34$

Answer: 34 cm^2

9 The nth term

The nth term of a sequence is $5n + 2$.
Write down the first three terms of the sequence.

Put $n = 1, 2, 3$ into $5n + 2$
$5 \times 1 + 2 = 7$
$5 \times 2 + 2 = 12$
$5 \times 3 + 2 = 17$

Answer: 7, 12, 17

10 Finding a missing value from the mean

The mean of four numbers is 12.
Three of the numbers are 15, 13 and 11.
Work out the other number.

Total of all the numbers: $12 \times 4 = 48$
Total of those given: $15 + 13 + 11 = 39$
$48 - 39 = 9$

Answer: 9