Day 346 **C Tier 10-a-day: Model Solutions**

1 Sequences

Here is a sequence with one number missing.
23, 27, 31, ?, 39
Work out the missing number.

The terms go up by 4 each time
31 + 4 = 35
Answer: 35

2 Cost of several items

A ticket costs 26p.
Work out the cost of 3 tickets.

26p × 3 = 78p
Answer: 78p

3 Reading a clock

Write down the time shown on the clock.

The minute hand points to 4, which is 4 × 5 = 20 minutes past, and the hour hand has passed the 7
The time is 7:20
Answer: 7:20

4 The range

Here are the shoe sizes of some students.
3 4 4 6 6
Work out the range.

Range = largest value − smallest value
6 − 3 = 3
Answer: 3

5 Percentages of amounts

Work out 20% of 35 kg.

20% = $\frac{1}{5}$, so divide by 5
35 ÷ 5 = 7
Answer: 7 kg

6 The nth term

The nth term of a sequence is 3n − 1.
Work out the 11th term of the sequence.

Put n = 11 into 3n − 1
3 × 11 − 1 = 32
Answer: 32

7 Ratio, finding the other part

At a rescue centre, the ratio of cats to dogs is 1 : 3.
There are 21 dogs.
Work out the number of cats.

21 ÷ 3 = 7 for each part
1 × 7 = 7
Answer: 7

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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: 12 × 7 = 84
Small rectangle: 9 × 4 = 36
Shaded area: 84 − 36 = 48

Answer: 48 m^2

9 Forming and solving equations

Ravi has x stickers.
A friend gives Ravi 14 more stickers.
Ravi now has 21 stickers.
(a) Write down an equation using x.
(b) Solve your equation to find how many stickers Ravi had at the start.

(a) x + 14 = 21
(b) x = 21 − 14 = 7

Answer: (a) x + 14 = 21 (b) x = 7

10 Order of operations

Work out 9 × 4 + 2.

Multiply first
9 × 4 = 36
36 + 2 = 38

Answer: 38