Day 62 **C Tier 10-a-day: Model Solutions**

1 Scaling a recipe

A recipe for a sponge cake for 4 people uses 250 g of rice.
Work out how much rice is needed for 12 people.

12 people is 3 times as many as 4 people
250 × 3 = 750
Answer: 750 g

2 Substitution

Work out the value of 9b when b = 5.

9b means 9 × b
9 × 5 = 45
Answer: 45

3 Types of triangle

Each angle of a triangle is 60°.
What type of triangle is it?

All three angles are equal, so all three sides are equal
Answer: equilateral

4 Ordering decimals

Write these numbers in order, starting with the smallest.
0.31, 0.25, 0.4, 0.3

Write each with the same number of decimal places
0.25, 0.30, 0.31, 0.40
Answer: 0.25, 0.3, 0.31, 0.4

5 Estimating measurements

Which is the best estimate for the height of a classroom door?
2 m 2 cm 20 m 2 km

A door is a little taller than an adult
The best estimate is 2 m
Answer: 2 m

6 Sequences

Here are the first four terms of a sequence.
5, 1, 6, 7
Each term is found by adding the two terms before it.
Write down the next two terms.

6 + 7 = 13
7 + 13 = 20
Answer: 13, 20

7 Ordering fractions

Write these fractions in order, starting with the smallest.
$\frac{4}{5}, \frac{1}{5}, \frac{3}{5}$

The denominators are all 5, so compare the numerators
1, 3, 4 (numerators in order)
Answer: $\frac{1}{5}, \frac{3}{5}, \frac{4}{5}$

Day 62 **C Tier 10-a-day: Model Solutions**

8 Expected number

The probability that a bus is late is $\frac{3}{10}$.

There are 20 buses in a week.

How many buses would you expect to be late?

Expected number = probability × number of trials

$\frac{3}{10} \times 20 = 6$

Answer: 6

9 Forming and solving equations

Priya has x stickers.

A friend gives Priya 15 more stickers.

Priya now has 31 stickers.

(a) Write down an equation using x.

(b) Solve your equation to find how many stickers Priya had at the start.

(a) $x + 15 = 31$

(b) $x = 31 - 15 = 16$

Answer: (a) x + 15 = 31 (b) x = 16

10 Perimeter from area

A rectangular poster has an area of 117 m^2.

Its width is 9 m.

Work out the perimeter of the poster.

Length = area ÷ width = 117 ÷ 9 = 13

Perimeter = 13 + 9 + 13 + 9 = 44

Answer: 44 m