Day 113 **C Tier 10-a-day: Model Solutions**

1 Number sequences

Here is a number sequence.
3, 5, 7, 9, ...
Write down the next two numbers.

The sequence goes up by 2 each time
9 + 2 = 11, 11 + 2 = 13
Answer: 11, 13

2 Types of triangle

A triangle has sides of length 11 cm, 11 cm and 11 cm.
What type of triangle is it?

All three sides are equal
Answer: equilateral

3 Solving equations

Solve $c - 6 = 17$

Add 6 to both sides
c = 17 + 6 = 23
Answer: c = 23

4 Probability from a bag

A bag contains 5 blue, 4 yellow and 6 red counters.
One is taken at random.
Write down the probability that it is yellow.

There are 15 in total, and 4 are yellow

Probability = $\frac{4}{15}$

Answer: $\mathbf{\frac{4}{15}}$

5 Ordering fractions

Write these fractions in order, starting with the largest.

$\frac{5}{10}, \frac{6}{10}, \frac{3}{10}$

The denominators are all 10, so compare the numerators
6, 5, 3 (numerators in order)

Answer: $\mathbf{\frac{6}{10}, \frac{5}{10}, \frac{3}{10}}$

6 Expressions for perimeter

A rectangle has length l cm and width n cm.
Write an expression for the perimeter of the shape.
Give your answer in its simplest form.

Perimeter = l + n + l + n
= 2l + 2n
Answer: 2l + 2n cm

7 Probability of not getting a colour

A bag contains 6 red marbles, 5 green marbles and 1 yellow marbles.
One is taken at random.
Write down the probability that it is not yellow.

Number that are not yellow: 6 + 5 = 11
Total: 12

Probability = $\frac{11}{12}$

Answer: $\mathbf{\frac{11}{12}}$

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8 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
14 × 3 = 42
42 ÷ 2 = 21
Answer: 21 cm^2

9 Counting outcomes

A café has 5 colours of phone case and 5 phone models.
Choose one colour and one model.
How many different choices are there?

5 × 5 = 25
Answer: 25

10 Order of operations

Work out 3 + 6 × 9.

Multiply first
6 × 9 = 54
3 + 54 = 57
Answer: 57