Day 85 **C Tier 10-a-day: Model Solutions**

1 Tally charts

The tally chart shows the ways some students travel to school.
Work out the total number of students.

Walk 5, Car 10, Bike 9
5 + 10 + 9 = 24
Answer: 24

2 Choosing units

Which unit is best for measuring the capacity of a bath?
Choose from: ml, litres

A bath holds about 150 litres
So the best unit is litres
Answer: litres

3 Probability of an event not happening

The probability that it rains tomorrow is $\frac{9}{10}$.

Work out the probability that this does not happen.

P(not) = 1 − P(event)
$1 - \frac{9}{10} = \frac{1}{10}$
Answer: $\frac{1}{10}$

4 Area on a square grid

The diagram shows a shape drawn on a square grid.
Each square has an area of 1 m^2.
Work out the area of the shape.

Count the squares in the shape.
Split into two rectangles: 2 × 3 = 6 and 4 × 2 = 8
6 + 8 = 14
Answer: 14 m^2

5 Simplifying expressions

Simplify 7z + 1 + 6z + 1

Letters: 7z + 6z = 13z
Numbers: 1 + 1 = 2
Answer: 13z + 2

6 Angles in a triangle

The diagram shows a triangle.
Work out the size of angle y.
The diagram is not drawn accurately.

Angles in a triangle add up to 180°
The square corner is 90°
90 + 30 = 120
180 − 120 = 60
Answer: y = 60°

7 Adding fractions

Work out $\frac{6}{9} - \frac{5}{9}$.

The denominators are the same, so subtract the numerators
6 − 5 = 1
Answer: $\frac{1}{9}$

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8 Expected number

A spinner lands on blue with probability $\frac{2}{3}$.

It is spun 12 times.

How many times would you expect it to land on blue?

Expected number = probability × number of trials

$\frac{2}{3} \times 12 = 8$

Answer: 8

9 Equations of lines

A straight line passes through the points

(8, 3), (8, 4), (8, 6)

Write down the equation of the line.

Every point has x-coordinate 8, so the line is vertical

Answer: x = 8

10 Timetables

The table shows the times of two buses.

Jo gets on Bus 1 at Park Road.

What time does Jo get to Station?

Read along the row for Station in the Bus 1 column

Answer: 10:40