Day 238 **C Tier 10-a-day: Model Solutions**

1 Proportion

2 apples cost £1.70.
Work out the cost of 5 apples.

Cost of one apple: 170p ÷ 2 = 85p
85p × 5 = 425p
425p = £4.25
Answer: £4.25

2 Angles on a straight line

The diagram shows a straight line.
Work out the size of angle p.
The diagram is not drawn accurately.

Angles on a straight line add up to 180°
60 + 35 = 95
180 − 95 = 85
Answer: p = 85°

3 Money: totals

Jack buys a ruler and a pencil.
A ruler costs £1.00.
A pencil costs 45p.
Work out the total cost.

£1.00 + 45p
100p + 45p = 145p = £1.45
Answer: £1.45

4 Perimeter of a regular polygon

The perimeter of a regular octagon is 64 mm.
Work out the length of one side.

A regular octagon has 8 equal sides
64 ÷ 8 = 8
Answer: 8 mm

5 Coordinates

Here are three points.
(2, 8), (8, 0), (0, 2)
Which point lies on the y-axis?

A point on the y-axis has x-coordinate 0
Answer: (0, 2)

6 Division in context

Each van holds 50 people.
142 people need a lift.
How many vans are needed?

142 ÷ 50 = 2 remainder 42
The extra people need another van
Answer: 3

7 The nth term

The nth term of a sequence is n + 4.
Work out the 8th term of the sequence.

Put n = 8 into n + 4
8 + 4 = 12
Answer: 12

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8 Simplifying fractions

Write $\frac{6}{14}$ in its simplest form.

Divide the top and bottom by 2

$\frac{6}{14} = \frac{3}{7}$

Answer: $\frac{3}{7}$

9 Reading a table

The table shows the favourite fruit of some students.
How many more students for Orange than for Banana?

Orange: 16 Banana: 11

16 − 11 = 5

Answer: 5

10 Equations of lines

A straight line passes through the points
(3, 5), (7, 5), (9, 5)
Write down the equation of the line.

Every point has y-coordinate 5, so the line is horizontal

Answer: y = 5