Day 265 **C Tier 10-a-day: Model Solutions**

1 Adding decimals

Work out 2.15 + 2.33.

Line up the decimal points
2.15 + 2.33 = 4.48
Answer: 4.48

2 Perimeter of a rectangle

The diagram shows a rectangle.
Work out the perimeter of the rectangle.
The diagram is not drawn accurately.

Add up all four sides
15 + 8 + 15 + 8 = 46
Answer: 46 cm

3 Subtracting decimals

Work out 5.02 − 1.39.

Line up the decimal points
5.02 − 1.39 = 3.63
Answer: 3.63

4 Angles in a quadrilateral

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

Angles in a quadrilateral add up to 360°
130 + 100 + 65 = 295
360 − 295 = 65
Answer: y = 65°

5 Map scales

On a map, 1 cm represents 20 km.
Two towns are 2 cm apart on the map.
Work out the real distance between the towns.

2 × 20 = 40
Answer: 40 km

6 Substitution

Work out the value of $n^2 + 9$ when n = 3.

$n^2 = 3 \times 3 = 9$
9 + 9 = 18
Answer: 18

7 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
8 × 8 = 64
64 ÷ 2 = 32
Answer: 32 m^2

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8 Ratio, finding the other part

In a club, the ratio of boys to girls is 1 : 3.
There are 7 boys.
Work out the number of girls.

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

9 The nth term

The nth term of a sequence is 8n.
Work out the 11th term of the sequence.

Put n = 11 into 8n
8 × 11 = 88
Answer: 88

10 Time from distance and speed

A cyclist travels 36 km at 12 km/h.
How long does the journey take?

Time = distance ÷ speed
36 ÷ 12 = 3
Answer: 3 hours