Day 120 **C Tier 10-a-day: Model Solutions**

1 Collecting like terms

Simplify b + 7b

All the terms are in b, so just add or subtract the numbers in front of b

Answer: 8b

2 Place value

Write down the value of the digit 4 in the number 4297.

The digit 4 is in the thousands column

4 × 1000 = 4000

Answer: 4000

3 Currency conversion

£1 = €1.50

Change £50 into euros.

£50 × 1.50 = €75

Answer: €75

4 Ordering decimals

Write these numbers in order, starting with the smallest.

0.45, 0.6, 0.55, 0.5

Write each with the same number of decimal places

0.45, 0.50, 0.55, 0.60

Answer: 0.45, 0.5, 0.55, 0.6

5 Reflecting a point

The point P has coordinates (2, −6).

P is reflected in the line x = 5.

Write down the coordinates of the image of P.

The point is 3 from the line, so the image is 3 on the other side: 5 + 3 = 8

Answer: (8, −6)

6 Division

Work out 175 ÷ 5.

5 × 35 = 175

So 175 ÷ 5 = 35

Answer: 35

7 Angles in a triangle (words)

Each of the three angles of an equilateral triangle is the same size.

Work out the size of one angle.

Angles in a triangle add up to 180°

180 ÷ 3 = 60

Answer: 60°

8 The nth term

The nth term of a sequence is 6n − 1.

Work out the 7th term of the sequence.

Put n = 7 into 6n − 1

6 × 7 − 1 = 41

Answer: 41

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9 Venn diagrams

Some students were asked whether they like swimming or cycling.
The Venn diagram shows the results.
How many students were asked altogether?

Add all four numbers: 10 + 6 + 11 + 8 = 35
Answer: 35

10 Coordinates

ABCD is a rectangle.
A is the point (0, 8), B is the point (7, 8) and C is the point (7, 1).
Write down the coordinates of D.

AB is horizontal so D has the same x-coordinate as A: 0
BC is vertical so D has the same y-coordinate as C: 1
Answer: (0, 1)