Day 227 **C Tier 10-a-day: Model Solutions**

1 Negative numbers: temperature

The temperature is 4°C.
It falls by 11°C.
What is the new temperature?

$4 - 11 = -7$
Answer: −7°C

2 Types of angle

Write down the type of each angle.
Choose from: acute, right, obtuse, reflex.
(a) 115°
(b) 15°

(a) 115° is between 90° and 180°, so it is obtuse
(b) 15° is less than 90°, so it is acute
Answer: (a) obtuse (b) acute

3 Writing numbers in figures

Write eight thousand eight hundred and seventy-five in figures.

Write each part: 8000 + 800 + 75
Add the parts together
Answer: 8875

4 Sequences

Here are the first four terms of a sequence.
1, 3, 4, 7
Each term is found by adding the two terms before it.
Write down the next two terms.

4 + 7 = 11
7 + 11 = 18
Answer: 11, 18

5 Scatter graphs

Here is a scatter graph of temperature against height above sea level.
Describe the correlation.

As height above sea level increases, temperature decreases
This is negative correlation
Answer: Negative correlation

6 Map scales

On a map, 1 cm represents 50 km.
On the map, two towns are 10 cm apart.
Work out the real distance between the towns.

1 cm represents 50 km
10 × 50 = 500
Answer: 500 km

7 Multiplying multiples of 10

Work out 70 × 7.

Work out 7 × 7 = 49
Then put the zeros back on
Answer: 490

Day 227 **C Tier 10-a-day: Model Solutions**

8 Midpoint of a line

C is the point (2, 3).
D is the point (10, 3).
Work out the coordinates of the midpoint of CD.

Find the number halfway between the x-coordinates: (2 + 10) ÷ 2 = 6
Find the number halfway between the y-coordinates: (3 + 3) ÷ 2 = 3
Answer: (6, 3)

9 Probability of not getting a colour

A bag contains 6 red sweets, 3 green sweets and 5 black sweets.
One is taken at random.
Write down the probability that it is not green.

Number that are not green: 6 + 5 = 11
Total: 14

Probability = $\frac{11}{14}$

Answer: $\mathbf{\frac{11}{14}}$

10 Simplifying expressions

Simplify 2y + 8 + 3y

Letters: 2y + 3y = 5y
Numbers: 8 on its own
Answer: 5y + 8