Day 129 **C Tier 10-a-day: Model Solutions**

1 Writing expressions

Simplify 5 × d

Write the number first, then the letters in alphabetical order, with no × signs

Answer: 5d

2 Estimating measurements

Which is the best estimate for the height of a classroom door?

2 km 2 cm 2 m 20 m

A door is a little taller than an adult

The best estimate is 2 m

Answer: 2 m

3 Money: change

Isla buys a gift for £8.65.

Isla pays with a £10 note.

How much change does Isla get?

Change = £10 − £8.65

1000p − 865p = £1.35

Answer: £1.35

4 Tables of values

Complete the table of values for y = 2x.

When x = 2: y = 2 × 2 = 4

When x = 4: y = 2 × 4 = 8

Answer: x = 2: y = 4; x = 4: y = 8

5 Line graphs

The line graph shows the depth of water in a tank at different times.

At what time was the depth of water greatest?

The highest point on the graph is 16 cm

This is at 9 am

Answer: 9 am

6 Map scales

On a map, 1 cm represents 50 m.

On the map, two towns are 10 cm apart.

Work out the real distance between the towns.

1 cm represents 50 m

10 × 50 = 500

Answer: 500 m

7 Special sequences

Here are the first four terms of a sequence.

16, 25, 36, 49

Write down the next two terms.

These are square numbers: 4^2, 5^2, 6^2, 7^2 and so on

The next is $8^2 = 64$

Then $9^2 = 81$

Answer: 64, 81

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8 Travel graphs

The graph shows a journey. Sam cycles from home to a shop and then back home.
(a) How far from home was the journey after 1 hour?
(b) Work out the total distance travelled.

(a) Read up from 1 on the time axis: 40 km
(b) To the shop and back: 40 + 40 = 80
Answer: (a) 40 km (b) 80 km

9 Timetables

The table shows the times of two buses.
Jo gets on Bus 2 at School.
What time does Jo get to Hospital?

Read along the row for Hospital in the Bus 2 column
Answer: 09:40

10 Perimeter of a square from its area

A square mat has an area of 144 cm^2.
Work out the perimeter of the mat.

Side × side = 144, so the side is 12 cm (because 12 × 12 = 144)
Perimeter = 4 × 12 = 48
Answer: 48 cm