Day 271 **C Tier 10-a-day: Model Solutions**

1 Writing numbers in figures

Write nine thousand three hundred and ninety-nine in figures.

Write each part: 9000 + 300 + 99
Add the parts together
Answer: 9399

2 The median

Here are the shoe sizes of some students.
8 7 7 5 4 5 8
Work out the median.

Put the numbers in order: 4 5 5 7 7 8 8
The middle number is 7
Answer: 7

3 Money: wages

Dan earns £12 for each hour of work.
Dan works for 9 hours.
How much does Dan earn?

£12 × 9 = £108
Answer: £108

4 Special sequences

Here are the first four terms of a sequence.
25, 36, 49, 64
Write down the next term.

These are square numbers: 5^2, 6^2, 7^2, 8^2 and so on
The next is $9^2 = 81$
Answer: 81

5 Scatter graphs

The scatter graph shows information about height and arm span.
What type of correlation does the scatter graph show?

As height increases, arm span also increases
This is positive correlation
Answer: Positive correlation

6 Equations of lines

A straight line passes through the points
(1, 0), (1, 1), (1, 2)
Write down the equation of the line.

Every point has x-coordinate 1, so the line is vertical
Answer: x = 1

7 Enlargement

A rectangle is 5 cm long and 1 cm wide.
It is enlarged by scale factor 5.
Write down the length and the width of the enlarged rectangle.

Multiply each length by 5
5 × 5 = 25
1 × 5 = 5
Answer: length 25 cm, width 5 cm

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8 The nth term

The nth term of a sequence is n + 2.
Write down the first three terms of the sequence.

Put n = 1, 2, 3 into n + 2
1 + 2 = 3, 2 + 2 = 4, 3 + 2 = 5
Answer: 3, 4, 5

9 Division in context

Each minibus holds 40 people.
142 people need a lift.
How many minibuses are needed?

142 ÷ 40 = 3 remainder 22
The extra people need another minibus
Answer: 4

10 Rotational symmetry

Write down the order of rotational symmetry of
(a) a regular octagon
(b) a rhombus

(a) A regular octagon fits onto itself 8 times in a full turn
(b) A rhombus fits onto itself 2 times in a full turn
Answer: (a) 8 (b) 2