Day 101 **C Tier 10-a-day: Model Solutions**

1 Rotational symmetry

Write down the order of rotational symmetry of
(a) a scalene triangle
(b) a rectangle

(a) A scalene triangle fits onto itself 1 time in a full turn
(b) A rectangle fits onto itself 2 times in a full turn
Answer: (a) 1 (b) 2

2 Reading a table

The table shows the ways some students travel to school.
How many more students for Car than for Bike?

Car: 11 Bike: 3
11 − 3 = 8
Answer: 8

3 Rounding decimals

Round 1.84 to 1 decimal place.

Look at the second decimal digit, which is 4
4 is less than 5, so round down
Answer: 1.8

4 Perimeter of a regular polygon

The perimeter of a regular decagon is 40 cm.
Work out the length of one side.

A regular decagon has 10 equal sides
40 ÷ 10 = 4
Answer: 4 cm

5 Solving equations

Solve $3x = 18$

3x means 3 × x, so divide both sides by 3
$x = 18 \div 3 = 6$
Answer: x = 6

6 The median of an even number of values

Here are the times, in minutes, of some bus journeys.
29 29 13 10
Work out the median.

Put the numbers in order: 10 13 29 29
The middle two numbers are 13 and 29
Halfway between them: (13 + 29) ÷ 2 = 21
Answer: 21

7 Coordinates

(a) Write down the coordinates of point A.
(b) Which point has coordinates (−2, −1)?

(a) A is right 2 and down 2
(b) Go left 2 and down 1: this is point Q
Answer: (a) (2, −2) (b) Q

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8 Pie chart angles

30 students were asked about their way of travelling to school.
7 of them walk to school.
The results are shown in a pie chart.
Work out the angle of the sector for those students.

360° ÷ 30 = 12° for each student
7 × 12° = 84°
Answer: 84°

9 The nth term

The nth term of a sequence is n + 7.
Work out the 7th term of the sequence.

Put n = 7 into n + 7
7 + 7 = 14
Answer: 14

10 Multiples: smallest common

Find the smallest number that is a multiple of both 6 and 8.

Multiples of 6: 6, 12, 18, 24
Multiples of 8: 8, 16, 24
24 is in both lists
Answer: 24