Day 356 **C Tier 10-a-day: Model Solutions**

1 Sequences

Here are the first four terms of a sequence.
25, 28, 31, 34
Write down the next term.

The terms go up by 3 each time
34 + 3 = 37
Answer: 37

2 Reading a table

The table shows the number of sandwiches each day.
Work out the total number of sandwiches on Wednesday and Friday.

Wednesday: 13, Friday: 24
13 + 24 = 37
Answer: 37

3 Probability from a bag

A bag contains 7 blue and 5 red marbles.
One is taken at random.
Write down the probability that it is red.

There are 12 in total, and 5 are red
Probability = $\frac{5}{12}$
Answer: $\frac{5}{12}$

4 Area on a square grid

The diagram shows a shape drawn on a square grid.
Each square has an area of 1 m^2.
Work out the area of the shape.

Count the squares in the shape.
Split into two rectangles: 4 × 3 = 12 and 4 × 3 = 12
12 + 12 = 24
Answer: 24 m^2

5 Estimation

Estimate the value of 78 + 79 by rounding each number to the nearest 10.

78 rounds to 80 and 79 rounds to 80
80 + 80 = 160
Answer: 160

6 Function machines

Here is a function machine.
The output is 22.
Work out the input.

Work backwards using the opposite operations
22 − 5 = 17
17 − 8 = 9
Answer: 9

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7 Reflection on a grid

The point P is drawn on the grid.
P is reflected in the line x = 5.
Write down the coordinates of the image of P.

P is (2, 3)
P is 3 squares to the left of the line, so the image is 3 squares to the right
x-coordinate: 5 + 3 = 8
Answer: (8, 3)

8 Pie chart angles

30 students were asked about their way of travelling to school.
3 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
3 × 12° = 36°
Answer: 36°

9 Forming and solving equations

There are x children in a club.
10 children leave.
There are now 10 children in the club.
(a) Write down an equation using x.
(b) Solve your equation to find how many children were in the club at first.

(a) x − 10 = 10
(b) x = 10 + 10 = 20
Answer: (a) x − 10 = 10 (b) x = 20

10 Division in context

Each van holds 25 people.
97 people need a lift.
How many vans are needed?

97 ÷ 25 = 3 remainder 22
The extra people need another van
Answer: 4