Day 322 **C Tier 10-a-day: Model Solutions**

1 The mode

Here are the ages of some children.
14 14 10 12 14 5 5 10 12 11
Write down the mode.

The mode is the value that appears most often
14 appears 3 times
Answer: 14

2 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: 3 × 2 = 6 and 3 × 4 = 12
6 + 12 = 18
Answer: 18 m^2

3 Rounding decimals

Round 76.4 to the nearest whole number.

Look at the first decimal digit, which is 4
4 is less than 5, so round down
Answer: 76

4 Estimating measurements

Which is the best estimate for the mass of an adult?
70 g 70 kg 7 g 700 kg

Adults weigh tens of kilograms
The best estimate is 70 kg
Answer: 70 kg

5 Equivalent fractions

Find the missing number.

$\frac{3}{5} = \frac{?}{15}$

5 × 3 = 15, so multiply the top by 3 as well
3 × 3 = 9
Answer: 9

6 Cost from area

A rectangular patio is 5 m long and 4 m wide.
Paving costs £5 per m^2.
Work out the cost of covering the patio.

Area = 5 × 4 = 20 m^2
Cost = 20 × £5 = £100
Answer: £100

7 Division with remainders

51 stickers are shared equally between 6 children.
(a) How many does each child get?
(b) How many are left over?

51 ÷ 6 = 8 remainder 3
Answer: (a) 8 (b) 3

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8 Number puzzles

Beth thinks of a number.
Beth adds 3.
The answer is 16.
What number did Beth think of?

Subtract 3 from 16
16 − 3 = 13
Answer: 13

9 Probability of not getting a colour

A bag contains 1 blue marbles, 4 white marbles and 6 green marbles.
One is taken at random.
Write down the probability that it is not blue.

Number that are not blue: 4 + 6 = 10
Total: 11

Probability = $\frac{10}{11}$

Answer: $\mathbf{\frac{10}{11}}$

10 Forming and solving equations

There are x children in a club.
6 children leave.
There are now 15 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 − 6 = 15
(b) x = 15 + 6 = 21
Answer: (a) x − 6 = 15 (b) x = 21