Day 283 **C Tier 10-a-day: Model Solutions**

1 Perimeter and area of a square

A square picture has sides of length 7 cm.
(a) Work out its perimeter.
(b) Work out its area.

(a) A square has 4 equal sides: 4 × 7 = 28
(b) Area = side × side: 7 × 7 = 49
Answer: (a) 28 cm (b) 49 cm^2

2 Tally charts

The tally chart shows the favourite fruit of some students.
Write down the frequency for Apple.

Each group of 5 is 5 and any extra lines are added on
Apple: 1 group of 5 and 4 = 5 × 1 + 4 = 9
Answer: 9

3 Perimeter on a square grid

The diagram shows a shape drawn on a square grid.
Each square has a side of length 1 cm.
Work out the perimeter of the shape.

Count the length of each side going round the shape.
3 + 1 + 4 + 3 + 4 + 1 + 3 + 3 = 22
Answer: 22 cm

4 Cost of one item

7 apples cost £2.10.
Work out the cost of one apple.

210p ÷ 7 = 30p
Answer: 30p

5 Simplifying expressions

Simplify 5y + 7b + 4y + 3b

Collect the b terms: 7 + 3 = 10b
Collect the y terms: 5 + 4 = 9y
Answer: 10b + 9y

6 Division with remainders

13 stickers are shared equally between 3 children.
(a) How many does each child get?
(b) How many are left over?

13 ÷ 3 = 4 remainder 1
Answer: (a) 4 (b) 1

7 Sharing in a ratio

Kira and Priya share 21 marbles in the ratio 2 : 5.
Work out how much each person gets.

Number of parts = 2 + 5 = 7
One part = 21 ÷ 7 = 3
Kira: 2 × 3 = 6 Priya: 5 × 3 = 15
Answer: Kira 6, Priya 15

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8 Timetables

The table shows the times of two buses.
How many minutes does Bus 1 take to go from Ashby to Brook?

09:35 − 09:20
Count on from 09:20 to 09:35
Answer: 15 minutes

9 Substitution

Work out the value of 3 + p when p = 3.

3 + 3 = 6
Answer: 6

10 Division in context

Each van holds 20 people.
77 people need a lift.
How many vans are needed?

77 ÷ 20 = 3 remainder 17
The extra people need another van
Answer: 4