Day 224 **C Tier 10-a-day: Model Solutions**

1 Tally charts

The tally chart shows the favourite colour of some children.
How many more children for Green than for Red?

Green: 7 Red: 6
7 − 6 = 1
Answer: 1

2 Collecting like terms

Simplify 5x + 4x

All the terms are in x, so just add or subtract the numbers in front of x
Answer: 9x

3 Time conversions

Change
(a) 8 minutes into seconds
(b) 10 weeks into days

(a) 1 minutes = 60 seconds, so multiply by 60: 8 × 60 = 480
(b) 1 weeks = 7 days, so multiply by 7: 10 × 7 = 70
Answer: (a) 480 seconds (b) 70 days

4 The mode

Here are the marks in a test.
20 18 14 12 17 20 8 7 10 4
Write down the mode.

The mode is the value that appears most often
20 appears 2 times
Answer: 20

5 Sequences

Here are the first four terms of a sequence.
38, 36, 34, 32
(a) Write down the next term.
(b) Write down the rule for finding the next term.

(a) The terms go down by 2 each time
Next term = 30
(b) Subtract 2 each time
Answer: (a) 30 (b) Subtract 2

6 Division with remainders

44 cards are shared equally between 5 children.
(a) How many does each child get?
(b) How many are left over?

44 ÷ 5 = 8 remainder 4
Answer: (a) 8 (b) 4

7 Enlargement

A square has sides of length 4 cm.
It is enlarged by scale factor 2.
Work out the length of a side of the enlarged square.

Multiply the side by the scale factor
4 × 2 = 8
Answer: 8 cm

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8 The nth term

The nth term of a sequence is n + 2.
Work out the 6th term of the sequence.

Put n = 6 into n + 2
6 + 2 = 8
Answer: 8

9 Map scales

On a map, 1 cm represents 50 km.
Two towns are 8 cm apart on the map.
Work out the real distance between the towns.

8 × 50 = 400
Answer: 400 km

10 Division in context

Each minibus holds 50 people.
182 people need a lift.
How many minibuses are needed?

182 ÷ 50 = 3 remainder 32
The extra people need another minibus
Answer: 4