Day 212 **C Tier 10-a-day: Model Solutions**

1 Writing expressions

Simplify c × 3

Write the number first, then the letters in alphabetical order, with no × signs

Answer: 3c

2 Reading a table

The table shows the number of books each day.
Work out the total number of books on Monday and Wednesday.

Monday: 24, Wednesday: 24
24 + 24 = 48

Answer: 48

3 Number puzzles

Femi thinks of a number.
Femi multiplies it by 8.
The answer is 24.
What number did Femi think of?

Divide 24 by 8
24 ÷ 8 = 3

Answer: 3

4 Simplifying ratios

Write the ratio 56 : 48 in its simplest form.

Divide both numbers by 8
56 ÷ 8 = 7 and 48 ÷ 8 = 6

Answer: 7 : 6

5 Ordering fractions

Write these fractions in order, starting with the smallest.

$\frac{4}{10}, \frac{2}{10}, \frac{3}{10}$

The denominators are all 10, so compare the numerators
2, 3, 4 (numerators in order)

Answer: $\frac{2}{10}, \frac{3}{10}, \frac{4}{10}$

6 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 + 2 + 3 + 2 + 6 + 4 = 20

Answer: 20 cm

7 Simplifying fractions

Write $\frac{10}{16}$ in its simplest form.

Divide the top and bottom by 2
$\frac{10}{16} = \frac{5}{8}$

Answer: $\frac{5}{8}$

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8 Angles in parallel lines

Two parallel lines are crossed by a straight line.
Work out the size of angle x.
Give a reason for your answer.

The angles are in matching positions, so they are corresponding angles
Corresponding angles are equal
x = 125°
Answer: x = 125° (corresponding angles)

9 Finding a missing value from the mean

The mean of five numbers is 8.
Four of the numbers are 13, 4, 12 and 6.
Work out the other number.

Total of all the numbers: 8 × 5 = 40
Total of those given: 13 + 4 + 12 + 6 = 35
40 − 35 = 5
Answer: 5

10 Angles between clock hands

Work out the smaller angle between the hour hand and the minute hand of a clock at 11 o'clock.

There are 12 hours round a clock, so each hour is 360 ÷ 12 = 30°
At 11 o'clock the hands are 11 hours apart (going the short way: 1)
1 × 30 = 30
Answer: 30°