Day 191 **C Tier 10-a-day: Model Solutions**

1 Collecting like terms

Simplify 8c + 5c

All the terms are in c, so just add or subtract the numbers in front of c

Answer: 13c

2 Fractions of a shape

What fraction of the shape is shaded?

There are 10 equal parts

7 parts are shaded

Fraction shaded = $\frac{7}{10}$

Answer: $\frac{7}{10}$

3 Rates

A tap fills a bath at 15 litres each minute.

How many litres are in the bath after 4 minutes?

15 × 4 = 60

Answer: 60 litres

4 Number puzzles

Leah thinks of a number.

Leah adds 8.

The answer is 36.

What number did Leah think of?

Subtract 8 from 36

36 − 8 = 28

Answer: 28

5 Cost from area

A rectangular lawn is 5 m long and 2 m wide.

Turf costs £4 per m^2.

Work out the cost of covering the lawn.

Area = 5 × 2 = 10 m^2

Cost = 10 × £4 = £40

Answer: £40

6 Writing ratios

In a class there are 5 boys and 4 girls.

Write down the ratio of girls to boys.

The ratio of girls to boys is written 4 : 5

Answer: 4 : 5

7 Fractions, decimals and percentages

Write $\frac{7}{10}$ as a decimal.

Make the bottom 100: $\frac{7}{10} = \frac{70}{100}$

= 0.7

Answer: 0.7

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8 Inequalities

n is a whole number.
Write down all the possible values of n when
$0 < n \leq 4$

n is bigger than 0 and at most 4
The smallest whole number is 1 and the largest is 4
Answer: 1, 2, 3, 4

9 Venn diagrams

Some students were asked whether they like maths or science.
The Venn diagram shows the results.
How many students were asked altogether?

Add all four numbers: 11 + 4 + 11 + 2 = 28
Answer: 28

10 Shaded area

The diagram shows a rectangle with a smaller rectangle cut out of it.
Work out the area of the shaded part.
The diagram is not drawn accurately.

Big rectangle: 14 × 9 = 126
Small rectangle: 10 × 4 = 40
Shaded area: 126 − 40 = 86
Answer: 86 cm^2