Day 153 **C Tier 10-a-day: Model Solutions**

1 Writing ratios

In a class there are 6 boys and 5 girls.
Write down the ratio of boys to girls.

The ratio of boys to girls is written 6 : 5
Answer: 6 : 5

2 Metric units

Change 3 metres to centimetres.

1 m = 100 cm
3 × 100 = 300
Answer: 300 cm

3 Collecting like terms

Simplify 2a + 7a

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

4 24-hour clock

Write 21:35 using the 12-hour clock.
Use am or pm in your answer.

Times after 12:00 are pm: subtract 12 from the hour, 21 − 12 = 9
21:35 = 9:35 pm
Answer: 9:35 pm

5 Subtraction

Work out 636 − 517.

636 − 517 = 119
Answer: 119

6 Simplifying expressions

Simplify 7p + 2q + 6q + 5p

Collect the p terms: 7 + 5 = 12p
Collect the q terms: 2 + 6 = 8q
Answer: 12p + 8q

7 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: 13 × 10 = 130
Small rectangle: 8 × 6 = 48
Shaded area: 130 − 48 = 82
Answer: 82 m^2

8 Sharing in a ratio

Harry and Ella share 25 sweets in the ratio 1 : 4.
Work out how much each person gets.

Number of parts = 1 + 4 = 5
One part = 25 ÷ 5 = 5
Harry: 1 × 5 = 5 Ella: 4 × 5 = 20
Answer: Harry 5, Ella 20

Day 153 **C Tier 10-a-day: Model Solutions**

9 Types of triangle

A triangle has sides of length 3 cm, 3 cm and 3 cm.
What type of triangle is it?

All three sides are equal
Answer: equilateral

10 Ratio, finding the other part

In a bowl, the ratio of apples to oranges is 2 : 1.
There are 4 apples.
Work out the number of oranges.

4 ÷ 2 = 2 for each part
1 × 2 = 2
Answer: 2