Day 76 **C Tier 10-a-day: Model Solutions**

1 Radius and diameter

The radius of a circular mat is 7 cm.
Work out the diameter.

The diameter is twice the radius
2 × 7 = 14
Answer: 14 cm

2 Multiplication

Work out 25 × 9.

20 × 9 = 180 and 5 × 9 = 45
180 + 45 = 225
Answer: 225

3 Which expression

Which of these means x divided by 5?

$\frac{x}{5}$, x + 5, x^2, 5x

x ÷ 5 is written $\frac{x}{5}$

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

4 Pay rates

Kira is paid £7 for each hour of work.
Kira is paid £28 in total.
How many hours did Kira work?

£28 ÷ £7 = 4
Answer: 4 hours

5 Types of triangle

A triangle has sides of length 11 cm, 2 cm and 11 cm.
What type of triangle is it?

Exactly two sides are equal (11 cm)
Answer: isosceles

6 Metric units

Change 6 km to metres.

1 km = 1000 m
6 × 1000 = 6000
Answer: 6000 m

7 Substitution

Work out the value of 9w + 2 when w = 4.

9w = 9 × 4 = 36
36 + 2 = 38
Answer: 38

8 Ratio, finding the other part

In a club, the ratio of boys to girls is 3 : 5.
There are 9 boys.
Work out the number of girls.

9 ÷ 3 = 3 for each part
5 × 3 = 15
Answer: 15

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9 Angles on a straight line

Three lines meet at a point on a straight line.
Work out the size of angle b.
The diagram is not drawn accurately.

Angles on a straight line add up to 180°
60 + 45 = 105
180 − 105 = 75
Answer: b = 75°

10 Simplifying fractions

Write $\frac{3}{6}$ in its simplest form.

Divide the top and bottom by 3
$\frac{3}{6} = \frac{1}{2}$

Answer: $\frac{1}{2}$