Day 88 **C Tier 10-a-day: Model Solutions**

1 Rounding

Write 6868 to the nearest hundred.

Look at the tens digit, which is 6
6 is 5 or more, so round up
Answer: 6900

2 Substitution

Work out the value of x^2 when x = 7.

x^2 means x × x
7 × 7 = 49
Answer: 49

3 Sampling

Grace wants to find out the favourite sport of students at a school.
Grace asks only boys in Year 9.
Give a reason why this sample may be biased.

Girls and other year groups are not included
Answer: Girls and other year groups are not included

4 Area of a triangle

The diagram shows a triangle.
Work out the area of the triangle.
The diagram is not drawn accurately.

Area of a triangle = base × height ÷ 2
4 × 9 = 36
36 ÷ 2 = 18
Answer: 18 cm^2

5 Fractions of a group

In a bag of 10 sweets, 2 are red.
What fraction of the sweets are red? Give your answer in its simplest form.

$\frac{2}{10}$

Divide top and bottom by 2: $\frac{1}{5}$

Answer: $\frac{1}{5}$

6 Sequences

Here are the first four terms of a sequence.
5, 8, 11, 14
Is 28 a term in this sequence?
You must show your working.

The terms go up by 3 each time
Continue the sequence: 5, 8, 11, 14, 17, 20, 23, 26, 29
28 is not in the list
Answer: No

7 Types of angle

Write down the type of each angle.
Choose from: acute, right, obtuse, reflex.
(a) 100°
(b) 90°

(a) 100° is between 90° and 180°, so it is obtuse
(b) 90° is exactly 90°, so it is right
Answer: (a) obtuse (b) right

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8 Timetables

The table shows the times of two buses.
How many minutes does Bus 1 take to go from Park Road to Library?

10:30 − 10:10
Count on from 10:10 to 10:30
Answer: 20 minutes

9 Perimeter of a square from its area

A square tile has an area of 144 cm^2.
Work out the perimeter of the tile.

Side × side = 144, so the side is 12 cm (because 12 × 12 = 144)
Perimeter = 4 × 12 = 48
Answer: 48 cm

10 Order of operations

Work out 6 + 5 × 3.

Multiply first
5 × 3 = 15
6 + 15 = 21
Answer: 21