Day 146 **C Tier 10-a-day: Model Solutions**

1 Multiples

Write down the first four multiples of 9.

Multiples are the 9 times table

Answer: 9, 18, 27, 36

2 Types of triangle

A triangle has angles of 70°, 40° and 70°.
What type of triangle is it?

Two of the angles are equal (70°), so two sides are equal

Answer: isosceles

3 Map scales

On a map, 1 cm represents 50 km.
Two towns are 150 km apart in real life.
How far apart are they on the map?

150 ÷ 50 = 3

Answer: 3 cm

4 Reflecting a point

The point P has coordinates $(-3, -1)$.
P is reflected in the y-axis.
Write down the coordinates of the image of P.

The y-coordinate stays the same and the x-coordinate changes sign

Answer: $(3, -1)$

5 Equivalent fractions

Find the missing number.

$\frac{1}{8} = \frac{2}{?}$

1 × 2 = 2, so multiply the bottom by 2 as well
8 × 2 = 16

Answer: 16

6 Counting outcomes

A café has 3 T-shirts and 3 pairs of shorts.
An outfit is one T-shirt and one pair of shorts.
How many different choices are there?

3 × 3 = 9

Answer: 9

7 Pattern sequences

The diagram shows the first three patterns in a sequence made by Ravi.
Each pattern is made from dots.
How many dots are in Pattern 4?

Each pattern is a square: 1 × 1, 2 × 2, 3 × 3
Pattern 4 is 4 × 4 = 16

Answer: 16

8 Missing side from area

A rectangle has an area of 12 cm^2.
Its length is 4 cm.
Work out its width.

Area = length × width
12 = 4 × width
width = 12 ÷ 4 = 3

Answer: 3 cm

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9 The nth term

The nth term of a sequence is 3n + 1.
Write down the first three terms of the sequence.

Put n = 1, 2, 3 into 3n + 1
3 × 1 + 1 = 4
3 × 2 + 1 = 7
3 × 3 + 1 = 10
Answer: 4, 7, 10

10 Reading a straight-line graph

The graph shows the cost of sand.
Use the graph to find how many kg of sand can be bought for £32.

Go across from £32 on the vertical axis to the line, then down
Amount = 8 kg
Answer: 8 kg