Day 169 **C Tier 10-a-day: Model Solutions**

1 The range

Here are the ages of some children.
11 13 13 8 11
Work out the range.

Range = largest value − smallest value
13 − 8 = 5
Answer: 5

2 Area on a square grid

The diagram shows a shape drawn on a square grid.
Each square has an area of 1 cm^2.
Work out the area of the shape.

Count the squares in the shape.
Split into two rectangles: 3 × 4 = 12 and 4 × 1 = 4
12 + 4 = 16
Answer: 16 cm^2

3 Tally charts

The tally chart shows the pets owned by some students.
How many more students for Dog than for Fish?

Dog: 8 Fish: 2
8 − 2 = 6
Answer: 6

4 Solving equations

Solve 8k = 24

8k means 8 × k, so divide both sides by 8
k = 24 ÷ 8 = 3
Answer: k = 3

5 Multiples

Write down the first four multiples of 11.

Multiples are the 11 times table
Answer: 11, 22, 33, 44

6 Isosceles triangles

The diagram shows an isosceles triangle.
Work out the size of angle p.
The diagram is not drawn accurately.

The triangle is isosceles, so the two base angles are equal
180 − 110 = 70
70 ÷ 2 = 35
Answer: p = 35°

7 Probability from a bag

A bag contains 8 pink and 6 black beads.
One is taken at random.
Write down the probability that it is pink.

There are 14 in total, and 8 are pink

Probability = $\frac{8}{14} = \frac{4}{7}$

Answer: $\frac{4}{7}$

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8 Money: totals

Kiran buys a bun and a milkshake.
A bun costs £1.85.
A milkshake costs 90p.
Work out the total cost.

£1.85 + 90p
185p + 90p = 275p = £2.75
Answer: £2.75

9 Translating a point

The point A has coordinates (2, 4).
A is moved 6 right and 2 up.
Write down the coordinates of the new point.

x-coordinate: 2 + 6 = 8
y-coordinate: 4 + 2 = 6
Answer: (8, 6)

10 Substitution

Work out the value of 2c when c = −3.

2 × (−3) = −6
Answer: −6