Day 196 **C Tier 10-a-day: Model Solutions**

1 Estimating measurements

Which is the best estimate for the length of a pencil?
15 cm 15 mm 15 m 15 km

A pencil is about as long as your hand
The best estimate is 15 cm
Answer: 15 cm

2 Substitution

Work out the value of 19 − n when n = 7.

19 − 7 = 12
Answer: 12

3 Bar charts

The bar chart shows the ways some students travel to school.
Write down the number of students for Train.

Read the height of the Train bar: 9
Answer: 9

4 Volume by counting cubes

A packet holds 1 cm cubes in layers.
Each layer is 8 cubes long and 5 cubes wide.
There are 2 layers.
How many cubes are there altogether?

Cubes in one layer: 8 × 5 = 40
Number of layers: 2
40 × 2 = 80
Answer: 80 cubes

5 Equivalent fractions

Find the missing number.

$\frac{3}{10} = \frac{12}{?}$

3 × 4 = 12, so multiply the bottom by 4 as well
10 × 4 = 40
Answer: 40

6 Reading straight line graphs

The graph shows the cost of printing photos.
(a) Work out the cost of printing 3 photos.
(b) Gita spends £5 printing photos. How many photos does Gita print?

(a) Go up from 3 on the bottom axis to the line, then across: £15
(b) Go across from 5 on the cost axis to the line, then down: 1
Answer: (a) £15 (b) 1

7 Stem and leaf diagrams

The stem and leaf diagram shows the times, in seconds, taken by runners.
Write down the largest value.

The last row has the largest stem and its last leaf is the largest
39
Answer: 39

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8 Cost from area

A rectangular hall floor is 7 m long and 6 m wide.
Flooring costs £10 per m^2.
Work out the cost of covering the hall floor.

Area = 7 × 6 = 42 m^2
Cost = 42 × £10 = £420
Answer: £420

9 Simplifying fractions

Write $\frac{2}{10}$ in its simplest form.

Divide the top and bottom by 2
$\frac{2}{10} = \frac{1}{5}$

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

10 Probability from a bag

A bag contains 2 orange, 3 green and 5 red sweets.
One is taken at random.
Write down the probability that it is orange.

There are 10 in total, and 2 are orange

Probability = $\frac{2}{10} = \frac{1}{5}$

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