**Day 357** **C Tier 10-a-day: Model Solutions**

## 1 Ordering numbers

Write these numbers in order, starting with the largest.
385, 354, 681, 361

Compare the hundreds digits first, then the tens
681, 385, 361, 354
**Answer: 681, 385, 361, 354**

## 2 Substitution

Work out the value of k − 4 when k = 14.

14 − 4 = 10
**Answer: 10**

## 3 Perimeter of an L-shape

The diagram shows an L-shape.
All the corners are right angles.
Work out the perimeter of the shape.
The diagram is not drawn accurately.

Find the two missing sides.
Missing horizontal side: 8 − 2 = 6
Missing vertical side: 7 − 2 = 5
Add all six sides: 8 + 2 + 6 + 5 + 2 + 7 = 30
**Answer: 30 m**

## 4 Writing ratios

A fruit bowl has 13 apples and 2 pears.
Write down the ratio of apples to pears.

The ratio of apples to pears is written 13 : 2
**Answer: 13 : 2**

## 5 Missing numbers

Find the missing number.
6 × ? = 54

54 ÷ 6 = 9
**Answer: 9**

## 6 Probabilities add up to 1

A game uses a four-coloured spinner.
The table shows the probability of each colour.
The probabilities add up to 1.
Work out the missing probability.

Add the known probabilities: 0.25 + 0.35 + 0.1 = 0.7
1 − 0.7 = 0.3
**Answer: 0.3**

## 7 Missing side from area

A rectangular wall has an area of 36 $m^2$.
Its width is 4 m.
Work out its length.

Area = length × width
36 = length × 4
length = 36 ÷ 4 = 9
**Answer: 9 m**

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## 8 Sampling

Sam wants to find out the favourite sport of students at a school.
Sam 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**

## 9 Money: saving

Sam saves £6 each week.
How many weeks does it take to save £24?

£24 ÷ £6 = 4
**Answer: 4 weeks**

## 10 The nth term

The nth term of a sequence is 4n + 2.
Work out the 6th term of the sequence.

Put n = 6 into 4n + 2
4 × 6 + 2 = 26
**Answer: 26**