**Day 69** **C Tier 10-a-day: Model Solutions**

## 1 The range

Here are the ages of some children.
8 14 12 9 13
Work out the range.

Range = largest value − smallest value
14 − 8 = 6
**Answer: 6**

## 2 Collecting like terms

Simplify 3k − k

All the terms are in k, so just add or subtract the numbers in front of k
**Answer: 2k**

## 3 Stem and leaf diagrams

The stem and leaf diagram shows the lengths, in cm, of pieces of ribbon.
How many values are there altogether?

Count the leaves in each row: 3 + 3 + 5 = 11
**Answer: 11**

## 4 Area of a rectangle

A rectangular classroom floor is 7 cm long and 2 cm wide.
Work out its area.

Area = length × width
7 × 2 = 14
**Answer: 14 cm$^2$**

## 5 Writing numbers in figures

Write nine thousand six hundred and sixty-five in figures.

Write each part: 9000 + 600 + 65
Add the parts together
**Answer: 9665**

## 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 − 130 = 50
50 ÷ 2 = 25
**Answer: p = 25°**

## 7 Completing a table

The table shows the favourite sport of 40 students.
Work out the number of students for Tennis.

Add the known numbers: 5 + 5 + 16 = 26
40 − 26 = 14
**Answer: 14**

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## 8 Missing side from area

A rectangular rug has an area of 14 $m^2$.
Its width is 2 m.
Work out its length.

Area = length × width
14 = length × 2
length = 14 ÷ 2 = 7
**Answer: 7 m**

## 9 Division in context

Each coach holds 25 people.
82 people need a lift.
How many coaches are needed?

82 ÷ 25 = 3 remainder 7
The extra people need another coach
**Answer: 4**

## 10 Substitution

Work out the value of 9z + 6 when z = 6.

9z = 9 × 6 = 54
54 + 6 = 60
**Answer: 60**