**Day 32** **C Tier 10-a-day: Model Solutions**

## 1 Sequences

Here are the first four terms of a sequence.
17, 20, 23, 26
Write down the next term.

The terms go up by 3 each time
26 + 3 = 29
**Answer: 29**

## 2 The range

Here are the numbers of books read by some students.
0 4 3 1 1 8
Work out the range.

Range = largest value − smallest value
8 − 0 = 8
**Answer: 8**

## 3 Halves, quarters and thirds

Write down a quarter of 68.

Halve, then halve again: 34, then 17
**Answer: 17**

## 4 Time from distance and speed

A bus travels 120 km at 30 km/h.
How long does the journey take?

Time = distance ÷ speed
120 ÷ 30 = 4
**Answer: 4 hours**

## 5 Faces, edges and vertices

How many faces does a triangular prism have?

A triangular prism: 2 ends plus 3 sides: 2 + 3 = 5
**Answer: 5**

## 6 Estimation

Estimate the value of 51 + 79 by rounding each number to the nearest 10.

51 rounds to 50 and 79 rounds to 80
50 + 80 = 130
**Answer: 130**

## 7 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: 7 − 4 = 3
Missing vertical side: 8 − 3 = 5
Add all six sides: 7 + 3 + 3 + 5 + 4 + 8 = 30
**Answer: 30 cm**

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## 8 Pattern sequences

The diagram shows the first three patterns in a sequence made by Omar.
Each pattern is made from dots.
How many dots are in Pattern 5?

Pattern n is n rows of (n + 1): 1 × 2, 2 × 3, 3 × 4
Pattern 5 is 5 × 6 = 30
**Answer: 30**

## 9 Cost from perimeter

A rectangular field is 16 m long and 10 m wide.
Fencing costs £6 per metre.
Work out the cost of putting fence all the way round the field.

Perimeter = 16 + 10 + 16 + 10 = 52 m
Cost = 52 × £6 = £312
**Answer: £312**

## 10 Map scales

On a map, 1 cm represents 5 km.
Two towns are 2 cm apart on the map.
Work out the real distance between the towns.

2 × 5 = 10
**Answer: 10 km**