Day 215 **C Tier 10-a-day: Model Solutions**

1 Sequences

Here are the first four terms of a sequence.
57, 48, 39, 30
Write down the next term.

The terms go down by 9 each time
30 − 9 = 21
Answer: 21

2 Even and odd numbers

Write down all the odd numbers in this list.
49, 41, 40, 94, 62

Odd numbers end in 1, 3, 5, 7 or 9
Answer: 49, 41

3 Cost from perimeter

A rectangular pond is 4 m long and 8 m wide.
Edging costs £3 per metre.
Work out the cost of putting edging all the way round the pond.

Perimeter = 4 + 8 + 4 + 8 = 24 m
Cost = 24 × £3 = £72
Answer: £72

4 Tables of values

The table shows some values of x and y.
(a) Write down the value of y when x = 1.
(b) Write down the value of x when y = 11.

(a) Find 1 in the top row; the number underneath is 7
(b) Find 11 in the bottom row; the number above is 3
Answer: (a) 7 (b) 3

5 Angles in a triangle

The diagram shows a triangle.
Work out the size of angle q.
The diagram is not drawn accurately.

Angles in a triangle add up to 180°
60 + 85 = 145
180 − 145 = 35
Answer: q = 35°

6 Reading a straight-line graph

The graph shows the cost of fabric.
Use the graph to find the cost of 8 m of fabric.

Go up from 8 on the horizontal axis to the line, then across
Cost = £32
Answer: £32

7 Reflecting a point

The point P has coordinates (−4, −2).
P is reflected in the line y = 1.
Write down the coordinates of the image of P.

The point is 3 from the line, so the image is 3 on the other side: 1 + 3 = 4
Answer: (−4, 4)

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8 Division in context

Each van holds 30 people.
77 people need a lift.
How many vans are needed?

77 ÷ 30 = 2 remainder 17
The extra people need another van
Answer: 3

9 Pie chart angles

120 students were asked about their favourite subject.
13 of them chose science.
The results are shown in a pie chart.
Work out the angle of the sector for those students.

360° ÷ 120 = 3° for each student
13 × 3° = 39°
Answer: 39°

10 Solving equations

Solve $k - 2 = 20$

Add 2 to both sides
k = 20 + 2 = 22
Answer: k = 22