Day 127 **C Tier 10-a-day: Model Solutions**

1 Cost of several items

A pencil costs 34p.
Work out the cost of 5 pencils.
Give your answer in pounds.

34p × 5 = 170p
170p = £1.70
Answer: £1.70

2 Compass directions and turns

A robot is facing south.
A robot turns 90° anticlockwise.
Which direction is the robot facing now?

90° is 1 quarter turn
Turning anticlockwise from south: south → east
Answer: east

3 Sequences

Here are the first four terms of a sequence.
5, 12, 19, 26
Is 75 a term in this sequence?
You must show your working.

The terms go up by 7 each time
Continue the sequence: 5, 12, 19, 26, 33, 40, 47, 54, 61, 68, 75, 82
75 is in the list
Answer: Yes

4 Factors

Write down all the factors of 21.

Find pairs that multiply to make 21
1 × 21, 3 × 7
Answer: 1, 3, 7, 21

5 Duration of a journey

A bus leaves at 9:45 am and arrives at 11:45 am.
How long does the journey take?

Count on from 9:45 am to 11:45 am:
15 minutes to 10:00 am
1 hour to 11:00 am
45 minutes to 11:45 am
Total: 2 hours
Answer: 2 hours

6 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 = 12.

(a) Find 1 in the top row; the number underneath is 7
(b) Find 12 in the bottom row; the number above is 2
Answer: (a) 7 (b) 2

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7 Best buys

Yoghurts are sold in two packs.
Pack A has 2 and costs £1.10.
Pack B has 5 and costs £3.00.
Which pack is better value?

Pack A: 110p ÷ 2 = 55p each
Pack B: 300p ÷ 5 = 60p each
Pack A is cheaper per item
Answer: Pack A

8 Cost from area

A rectangular lawn is 8 m long and 6 m wide.
Turf costs £10 per m^2.
Work out the cost of covering the lawn.

Area = 8 × 6 = 48 m^2
Cost = 48 × £10 = £480
Answer: £480

9 Adding fractions

Work out $\frac{1}{5} + \frac{2}{5}$.

The denominators are the same, so add the numerators
1 + 2 = 3
Answer: $\mathbf{\frac{3}{5}}$

10 Coordinates

Here are three points.
(1, 7), (9, 0), (0, 6)
Which point lies on the y-axis?

A point on the y-axis has x-coordinate 0
Answer: (0, 6)