Day 25 **C Tier 10-a-day: Model Solutions**

1 Multiplying and dividing by 10 and 100

Work out 2.82 × 100.

Multiplying by 100 moves each digit 2 places to the left

Answer: 282

2 Cost of one item

5 buns cost £3.00.
Work out the cost of one bun.

300p ÷ 5 = 60p

Answer: 60p

3 Naming quadrilaterals

Write down the name of the quadrilateral that has four right angles and exactly two lines of symmetry.

The quadrilateral with four right angles and exactly two lines of symmetry is a rectangle

Answer: rectangle

4 Powers

Work out 5^4.

$5^4 = 5 \times 5 \times 5 \times 5$
$= 625$

Answer: 625

5 Proportion

3 pencils cost £1.80.
Work out the cost of 7 pencils.

Cost of one pencil: 180p ÷ 3 = 60p
60p × 7 = 420p
420p = £4.20

Answer: £4.20

6 Function machines

Here is a function machine.
The output is 30.
Work out the input.

Work backwards using the opposite operations
30 ÷ 2 = 15
15 − 5 = 10

Answer: 10

7 Finding a missing value from the mean

The mean of five numbers is 11.
Four of the numbers are 7, 17, 5 and 20.
Work out the other number.

Total of all the numbers: 11 × 5 = 55
Total of those given: 7 + 17 + 5 + 20 = 49
55 − 49 = 6

Answer: 6

8 Circles with an approximate pi

A circle has a diameter of 10 cm.
Use $\pi = 3$ to work out an estimate for its circumference.

Circumference = π × diameter
3 × 10 = 30

Answer: 30 cm

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9 Tables of values

Complete the table of values for y = 6x.

When x = 2: y = 6 × 2 = 12
When x = 4: y = 6 × 4 = 24
Answer: x = 2: y = 12; x = 4: y = 24

10 Multiplication

Work out 24 × 8.

20 × 8 = 160 and 4 × 8 = 32
160 + 32 = 192
Answer: 192