Day 194 **C Tier 10-a-day: Model Solutions**

1 Sequences

Here is a sequence with one number missing.
9, 18, ?, 36, 45
Work out the missing number.

The terms go up by 9 each time
18 + 9 = 27
Answer: 27

2 Subtraction

Work out 873 − 340.

873 − 340 = 533
Answer: 533

3 Types of triangle

A triangle has sides of length 4 cm, 3 cm and 3 cm.
What type of triangle is it?

Exactly two sides are equal (3 cm)
Answer: isosceles

4 Function machines

Here is a function machine.
Work out the output when the input is 3.

3 × 4 = 12
12 − 11 = 1
Answer: 1

5 Probability of an event not happening

The probability that the bus is late is 0.2.
Work out the probability that this does not happen.

P(not) = 1 − P(event)
1 − 0.2 = 0.8
Answer: 0.8

6 Number puzzles

Sam thinks of a number.
Sam divides it by 7.
The answer is 7.
What number did Sam think of?

Multiply 7 by 7
7 × 7 = 49
Answer: 49

7 Ratio, finding the other part

In a bowl, the ratio of apples to oranges is 1 : 4.
There are 36 oranges.
Work out the number of apples.

36 ÷ 4 = 9 for each part
1 × 9 = 9
Answer: 9

8 Multiplying multiples of 10

Work out 60 × 4.

Work out 6 × 4 = 24
Then put the zeros back on
Answer: 240

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9 Cost from area

A rectangular lawn is 9 m long and 2 m wide.

Turf costs £10 per m^2.

Work out the cost of covering the lawn.

Area = $9 \times 2 = 18$ m^2

Cost = $18 \times £10 = £180$

Answer: £180

10 Order of operations

Work out $2 + 4 \times 9$.

Multiply first

$4 \times 9 = 36$

$2 + 36 = 38$

Answer: 38