Day 203 **C Tier 10-a-day: Model Solutions**

1 Subtraction

Work out 450 − 227.

450 − 227 = 223

Answer: 223

2 Which expression

Which of these means m multiplied by 5?

m^2, m + 5, $\frac{m}{5}$, 5m

m × 5 is written 5m

Answer: 5m

3 Faces, edges and vertices

How many vertices does a triangular prism have?

A triangular prism: 3 corners on each end: 2 × 3 = 6

Answer: 6

4 Probability with dice

A fair 8-sided dice numbered 1 to 8 is rolled.
Write down the probability of rolling
(a) a 8
(b) an even number

(a) 1 out of 8 numbers: $\frac{1}{8}$

(b) 4 out of 8 numbers: $\frac{4}{8} = \frac{1}{2}$

Answer: (a) $\frac{1}{8}$ (b) $\frac{1}{2}$

5 24-hour clock

Write 7:10 pm using the 24-hour clock.

pm times: add 12 to the hour, e.g. 7 + 12 = 19
7:10 pm = 19:10

Answer: 19:10

6 Multiples: smallest common

Find the smallest number that is a multiple of both 3 and 4.

Multiples of 3: 3, 6, 9, 12
Multiples of 4: 4, 8, 12
12 is in both lists

Answer: 12

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: 10 − 7 = 3
Missing vertical side: 9 − 2 = 7
Add all six sides: 10 + 2 + 3 + 7 + 7 + 9 = 38

Answer: 38 m

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8 Negative numbers

Work out 4 − 8.

Use a number line

4 − 8 = −4

Answer: −4

9 Substitution into formulae

Use the formula T = 2m − 2n to work out the value of T when m = 6 and n = 3.

T = 2 × 6 − 2 × 3

= 12 − 6 = 6

Answer: T = 6

10 Pie chart angles

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

360° ÷ 30 = 12° for each student

3 × 12° = 36°

Answer: 36°