Day 126 **C Tier 10-a-day: Model Solutions**

1 Types of angle

Write down the type of each angle.
Choose from: acute, right, obtuse, reflex.
(a) 10°
(b) 315°

(a) 10° is less than 90°, so it is acute
(b) 315° is more than 180°, so it is reflex
Answer: (a) acute (b) reflex

2 Place value

Write down the value of the digit 6 in the number 62,074.

The digit 6 is in the ten thousands column
6 × 10000 = 60000
Answer: 60,000

3 Probability from a bag

A bag contains 6 green and 5 blue marbles.
One is taken at random.
Write down the probability that it is green.

There are 11 in total, and 6 are green
Probability = $\frac{6}{11}$
Answer: $\frac{6}{11}$

4 Area of a rectangle

A rectangular lawn is 12 cm long and 4 cm wide.
Work out its area.

Area = length × width
12 × 4 = 48
Answer: 48 cm^2

5 Coordinates

Write down the coordinates of
(a) point U
(b) point C

Go across first (x), then up (y)
U is 2 across and 4 up
C is 7 across and 2 up
Answer: (a) (2, 4) (b) (7, 2)

6 Bearings from compass points

Bearings are measured clockwise from north.
Write down the three-figure bearing of
(a) north-west
(b) east

North is 000°. Each compass point to the right (clockwise) is a further 45°.
(a) north-west is 315°
(b) east is 090°
Answer: (a) 315° (b) 090°

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7 Using formulae

The cost, C pounds, of n tickets is given by the formula C = 5n.
(a) Work out the value of C when n = 5.
(b) Work out the value of n when C = 45.

(a) C = 5 × 5 = 25
(b) 5n = 45, so n = 45 ÷ 5 = 9
Answer: (a) C = 25 (b) n = 9

8 Timetables

The table shows the times of two buses.
How many minutes does Bus 2 take to go from Ashby to Brook?

09:30 – 09:10
Count on from 09:10 to 09:30
Answer: 20 minutes

9 Substitution into formulae

Use the formula V = 6a + 4b to work out the value of V when a = 9 and b = 7.

V = 6 × 9 + 4 × 7
= 54 + 28 = 82
Answer: V = 82

10 Pie chart angles

24 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° ÷ 24 = 15° for each student
3 × 15° = 45°
Answer: 45°