Day 310 **C Tier 10-a-day: Model Solutions**

1 Reading a clock

The clock shows the time now.
(a) Write down the time shown.
(b) What time will it be in 25 minutes?

(a) The minute hand points to 5, which is 5 × 5 = 25 minutes past, and the hour hand has passed the 2, so the time is 2:25
(b) 2:25 + 25 minutes = 2:50
Answer: (a) 2:25 (b) 2:50

2 The range

Here are the shoe sizes of some students.
5 3 7 7 6 3 7
Work out the range.

Range = largest value − smallest value
7 − 3 = 4
Answer: 4

3 Length conversions

Change
(a) 9 m into cm
(b) 15 m into cm

(a) 1 m = 100 cm, so multiply by 100: 9 × 100 = 900
(b) 1 m = 100 cm, so multiply by 100: 15 × 100 = 1500
Answer: (a) 900 cm (b) 1500 cm

4 Money

A packet of crisps costs 84p.
Work out the cost of 7 packets.
Give your answer in pounds.

84p × 7 = 588p
588p = £5.88
Answer: £5.88

5 Expressions for perimeter

A square has sides of length a cm.
Write an expression for the perimeter of the shape.
Give your answer in its simplest form.

Perimeter = a + a + a + a
= 4a
Answer: 4a cm

6 Reading coordinates

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

Read the x-coordinate (across) first, then the y-coordinate (up or down).
(a) A: (1, 4)
(b) C: (5, 5)
Answer: (a) (1, 4) (b) (5, 5)

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7 Stem and leaf diagrams

The stem and leaf diagram shows the times, in seconds, taken by runners.
Work out the range.

Largest = 44, smallest = 10
44 − 10 = 34
Answer: 34

8 Digit cards

Here are four digit cards:
[6] [7] [2] [4]
Use all four cards to make the largest possible 4-digit number.

Put the biggest digit in the thousands column, then the next biggest, and so on
Answer: 7642

9 Coordinates

ABCD is a rectangle.
A is the point (9, 2), B is the point (0, 2) and C is the point (0, 7).
Write down the coordinates of D.

AB is horizontal so D has the same x-coordinate as A: 9
BC is vertical so D has the same y-coordinate as C: 7
Answer: (9, 7)

10 Pie chart angles

72 students were asked about their favourite fruit.
8 of them chose bananas.
The results are shown in a pie chart.
Work out the angle of the sector for those students.

360° ÷ 72 = 5° for each student
8 × 5° = 40°
Answer: 40°