Day 166 **C Tier 10-a-day: Model Solutions**

1 Cost of several items

A pencil costs 46p.
Work out the cost of 4 pencils.
Give your answer in pounds.

46p × 4 = 184p
184p = £1.84
Answer: £1.84

2 Units of time

How many seconds are there in 2 minutes?

1 minute = 60 seconds
2 × 60 = 120
Answer: 120

3 Which expression

Which of these means p multiplied by itself?

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

p × p is written p^2
Answer: p^2

4 Number sequences

Here is a number sequence.
2, 6, 10, 14, ...
Write down the next two numbers.

The sequence goes up by 4 each time
14 + 4 = 18, 18 + 4 = 22
Answer: 18, 22

5 Rates

A baker makes 15 loaves each hour.
How many loaves does the baker make in 7 hours?

15 × 7 = 105
Answer: 105 loaves

6 Reading a scale

The diagram shows part of a measuring scale.
Write down the reading shown by the arrow.

The labelled marks go up in 1. There are 5 small steps between labelled marks, so each small step is 1 ÷ 5 = 0.2.
The arrow is 2 small steps after 2.
2 + 2 × 0.2 = 2.4
Answer: 2.4 litres

7 Coordinates

(a) Write down the coordinates of point Q.
(b) Which point has coordinates (3, 1)?

(a) Q is left 1 and down 1
(b) Go right 3 and up 1: this is point A
Answer: (a) (−1, −1) (b) A

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8 Finding a missing value from the mean

The mean of four numbers is 11.
Three of the numbers are 1, 19 and 11.
Work out the other number.

Total of all the numbers: 11 × 4 = 44
Total of those given: 1 + 19 + 11 = 31
44 − 31 = 13
Answer: 13

9 Time

A swimming lesson starts at 3:30 pm.
It lasts for 1 hour 15 minutes.
At what time does it finish?

3:30 pm + 1 hour = 4:30 pm
4:30 pm + 15 minutes = 4:45 pm
Answer: 4:45 pm

10 Circles with an approximate pi

A circle has a diameter of 8 cm.
Use $\pi = 3$ to work out an estimate for its circumference.

Circumference = π × diameter
3 × 8 = 24
Answer: 24 cm