Day 228 **C Tier 10-a-day: Model Solutions**

1 Estimating measurements

Which is the best estimate for the mass of an apple?
150 kg 1.5 g 150 g 15 kg

An apple is light, a few hundred grams at most
The best estimate is 150 g
Answer: 150 g

2 Solving equations

Solve $h - 8 = 9$

Add 8 to both sides
$h = 9 + 8 = 17$
Answer: h = 17

3 Pictograms

The pictogram shows the number of ice creams sold at a kiosk.
Work out the total number of ice creams.

Number of symbols: 1.5 + 2.5 + 2.5 + 4 = 10.5
10.5 × 10 = 105
Answer: 105

4 Subtracting decimals

Work out 7.7 − 4.0.

Line up the decimal points
7.7 − 4.0 = 3.7
Answer: 3.7

5 Number puzzles

Nina thinks of a number.
Nina divides it by 5.
The answer is 10.
What number did Nina think of?

Multiply 10 by 5
10 × 5 = 50
Answer: 50

6 24-hour clock

Write 11:15 using am or pm.

Times before 12:00 are am
Answer: 11:15 am

7 Midpoint of a line

P is the point (−4, 2).
Q is the point (2, 6).
Work out the coordinates of the midpoint of PQ.

Find the number halfway between the x-coordinates: (−4 + 2) ÷ 2 = −1
Find the number halfway between the y-coordinates: (2 + 6) ÷ 2 = 4
Answer: (−1, 4)

8 Using formulae

The distance, d km, travelled in t hours is given by the formula d = 3t.
(a) Work out the value of d when t = 6.
(b) Work out the value of t when d = 12.

(a) d = 3 × 6 = 18
(b) 3t = 12, so t = 12 ÷ 3 = 4
Answer: (a) d = 18 (b) t = 4

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9 Probabilities add up to 1

A game uses a four-coloured spinner.
The table shows the probability of each colour.
The probabilities add up to 1.
Work out the missing probability.

Add the known probabilities: 0.15 + 0.2 + 0.4 = 0.75
1 − 0.75 = 0.25
Answer: 0.25

10 Order of operations

Work out 7 × 3 + 2.

Multiply first
7 × 3 = 21
21 + 2 = 23
Answer: 23