Day 343 **C Tier 10-a-day: Model Solutions**

1 Solving equations

Solve w + 5 = 21

Subtract 5 from both sides
w = 21 − 5 = 16
Answer: w = 16

2 Isosceles triangles

The diagram shows an isosceles triangle.
Work out the size of angle p.
The diagram is not drawn accurately.

The triangle is isosceles, so the two base angles are equal
180 − 80 = 100
100 ÷ 2 = 50
Answer: p = 50°

3 Rounding money

Round £9.40 to the nearest pound.

Look at the pence: 40 p
less than 50p, so round down
Answer: £9

4 Line graphs

The line graph shows the number of cars in a car park at different times.
Work out the increase in the number of cars between 10 am and 1 pm.

At 10 am: 15 At 1 pm: 20
20 − 15 = 5
Answer: 5

5 Coordinates

Here are three points.
(3, 0), (7, 1), (0, 5)
Which point lies on the x-axis?

A point on the x-axis has y-coordinate 0
Answer: (3, 0)

6 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: 0.35 + 0.25 + 0.1 = 0.7
1 − 0.7 = 0.3
Answer: 0.3

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 = 20.

(a) C = 5 × 5 = 25
(b) 5n = 20, so n = 20 ÷ 5 = 4
Answer: (a) C = 25 (b) n = 4

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8 Length conversions

Change
(a) 1500 cm into m
(b) 3000 m into km

(a) 100 cm = 1 m, so divide by 100: 1500 ÷ 100 = 15
(b) 1000 m = 1 km, so divide by 1000: 3000 ÷ 1000 = 3
Answer: (a) 15 m (b) 3 km

9 Best buys

Tins of beans are sold in two packs.
Pack A has 4 and costs 80p.
Pack B has 8 and costs £1.20.
Which pack is better value?

Pack A: 80p ÷ 4 = 20p each
Pack B: 120p ÷ 8 = 15p each
Pack B is cheaper per item
Answer: Pack B

10 Multiplication

Work out 43 × 8.

40 × 8 = 320 and 3 × 8 = 24
320 + 24 = 344
Answer: 344