Day 276 **C Tier 10-a-day: Model Solutions**

1 Substitution

Work out the value of 2k when k = 7.

2k means 2 × k
2 × 7 = 14
Answer: 14

2 Mass and capacity conversions

Change 25 kg into g.

1 kg = 1000 g, so multiply by 1000: 25 × 1000 = 25000
Answer: 25000 g

3 Cost of several items

A pencil costs 28p.
Work out the cost of 6 pencils.
Give your answer in pounds.

28p × 6 = 168p
168p = £1.68
Answer: £1.68

4 Number puzzles

Leah thinks of a number.
Leah adds 7.
The answer is 32.
What number did Leah think of?

Subtract 7 from 32
32 − 7 = 25
Answer: 25

5 Reflecting a point

The point P has coordinates (6, 3).
P is reflected in the y-axis.
Write down the coordinates of the image of P.

The y-coordinate stays the same and the x-coordinate changes sign
Answer: (−6, 3)

6 Reading a pie chart

20 people were asked about their favourite sport.
The pie chart shows the results.
How many people chose Rugby?

The Rugby sector is a half of the pie chart
20 ÷ 2 = 10
Answer: 10

7 Timetables

The table shows the times of two buses.
Jo gets on Bus 2 at Park Road.
What time does Jo get to Station?

Read along the row for Station in the Bus 2 column
Answer: 11:25

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8 Forming and solving equations

There are x children in a club.
12 children leave.
There are now 3 children in the club.
(a) Write down an equation using x.
(b) Solve your equation to find how many children were in the club at first.

(a) $x - 12 = 3$
(b) $x = 3 + 12 = 15$
Answer: (a) $x - 12 = 3$ (b) $x = 15$

9 Cost from perimeter

A rectangular pond is 6 m long and 5 m wide.
Edging costs £5 per metre.
Work out the cost of putting edging all the way round the pond.

Perimeter = 6 + 5 + 6 + 5 = 22 m
Cost = 22 × £5 = £110
Answer: £110

10 Time

A lesson starts at 4:50 pm.
It finishes at 8:40 pm.
How long does it last?

4:50 pm to 5:00 pm is 10 minutes
5:00 pm to 8:00 pm is 3 hours
8:00 pm to 8:40 pm is 40 minutes
Add the parts together
Answer: 3 hours 50 minutes