Day 87 **C Tier 10-a-day: Model Solutions**

1 Rounding

Write 382 to the nearest ten.

Look at the units digit, which is 2
2 is less than 5, so round down
Answer: 380

2 Formulae in words

Here is a rule to work out the fare for a taxi journey.
Fare (£) = 2 × number of miles + 3
Work out the fare for a journey of 5 miles.

Fare (£) = 2 × 5 + 3
= 10 + 3 = 13
Answer: £13

3 Angles on a straight line

Two lines meet on a straight line.
Work out the size of angle a.
The diagram is not drawn accurately.

Angles on a straight line add up to 180°
180 − 125 = 55
Answer: a = 55°

4 Reading a table

The table shows the number of sandwiches each day.
Work out the total number of sandwiches on Tuesday and Wednesday.

Tuesday: 16, Wednesday: 19
16 + 19 = 35
Answer: 35

5 Expected number

A spinner lands on blue with probability 0.5.
It is spun 50 times.
How many times would you expect it to land on blue?

Expected number = probability × number of trials
0.5 × 50 = 25
Answer: 25

6 Substitution

Work out the value of t^2 when t = 3.

t^2 means t × t
3 × 3 = 9
Answer: 9

7 Reflection on a grid

The point P is drawn on the grid.
P is reflected in the line x = 4.
Write down the coordinates of the image of P.

P is (3, 4)
P is 1 squares to the left of the line, so the image is 1 squares to the right
x-coordinate: 4 + 1 = 5
Answer: (5, 4)

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8 Travel graphs

The graph shows a journey. Sam cycles from home to a shop and then back home.
(a) After how many hours did the journey start back home?
(b) How long did the journey home take?

(a) The line starts to go down at 2 hours
(b) 3 − 2 = 1
Answer: (a) 2 hours (b) 1 hour

9 Forming and solving equations

There are x children in a club.
9 children leave.
There are now 2 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 − 9 = 2
(b) x = 2 + 9 = 11
Answer: (a) x − 9 = 2 (b) x = 11

10 Circles with an approximate pi

A circle has a radius of 4 cm.
Work out its circumference.
Use π = 3.14

Diameter = 2 × 4 = 8 cm
Circumference = π × diameter = 3.14 × 8 = 25.12
Answer: 25.12 cm