Day 112 **C Tier 10-a-day: Model Solutions**

1 Addition

Work out 607 + 344.

Add the hundreds, tens and units
607 + 344 = 951
Answer: 951

2 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 11 am and 2 pm.

At 11 am: 25 At 2 pm: 30
30 − 25 = 5
Answer: 5

3 Compass directions and turns

Sam is facing east.
Sam turns 270° anticlockwise.
Which direction is Sam facing now?

270° is 3 quarter turns
Turning anticlockwise from east: east → north → west → south
Answer: south

4 Number puzzles

Nina thinks of a number.
Nina subtracts 5.
The answer is 19.
What number did Nina think of?

Add 5 to 19
19 + 5 = 24
Answer: 24

5 Perimeter of a regular polygon

A regular equilateral triangle has sides of length 8 mm.
Work out its perimeter.

A regular equilateral triangle has 3 equal sides
3 × 8 = 24
Answer: 24 mm

6 Substitution

c = 8 and z = 4
Work out the value of
(a) 2c + z
(b) c + z

(a) 2 × 8 + 4 = 20
(b) 8 + 4 = 12
Answer: (a) 20 (b) 12

7 Equivalent fractions

Find the missing number.

$\frac{1}{4} = \frac{4}{?}$

1 × 4 = 4, so multiply the bottom by 4 as well
4 × 4 = 16
Answer: 16

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8 Simplifying expressions

Simplify 5a + 4 + 5a

Letters: 5a + 5a = 10a
Numbers: 4 on its own
Answer: 10a + 4

9 Multiplying multiples of 10

Work out 200 × 20.

Work out 2 × 2 = 4
Then put the zeros back on
Answer: 4000

10 Venn diagrams

Some students were asked whether they like tea or coffee.
The Venn diagram shows the results.
How many students are in at least one circle?

Add the numbers inside the circles: 8 + 6 + 11 = 25
Answer: 25