Day 236 **C Tier 10-a-day: Model Solutions**

1 Halves, quarters and thirds

Write down half of 62.

62 ÷ 2 = 31

Answer: 31

2 Reading a clock

The clock shows the time now.
(a) Write down the time shown.
(b) What time will it be in 25 minutes?

(a) The minute hand points to 9, which is 9 × 5 = 45 minutes past, and the hour hand has passed the 2, so the time is 2:45
(b) 2:45 + 25 minutes = 3:10

Answer: (a) 2:45 (b) 3:10

3 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: 20 At 1 pm: 25
25 − 20 = 5

Answer: 5

4 Number puzzles

Ravi thinks of a number.
Ravi subtracts 8.
The answer is 30.
What number did Ravi think of?

Add 8 to 30
30 + 8 = 38

Answer: 38

5 Probability from a bag

A bag contains 7 yellow and 6 orange sweets.
One is taken at random.
Write down the probability that it is yellow.

There are 13 in total, and 7 are yellow

Probability = $\frac{7}{13}$

Answer: $\frac{7}{13}$

6 Reading straight line graphs

The graph shows the cost of a taxi journey.
(a) Work out the cost of a journey of 5 miles.
(b) Gita pays £16 for a taxi. How many miles was the journey?

(a) Go up from 5 on the bottom axis to the line, then across: £24
(b) Go across from 16 on the cost axis to the line, then down: 3

Answer: (a) £24 (b) 3

7 Midpoint of a line

C is the point (0, 4).
D is the point (0, 14).
Work out the coordinates of the midpoint of CD.

Find the number halfway between the x-coordinates: (0 + 0) ÷ 2 = 0
Find the number halfway between the y-coordinates: (4 + 14) ÷ 2 = 9

Answer: (0, 9)

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8 Cost of one item

7 stamps cost £1.75.
Work out the cost of one stamp.

175p ÷ 7 = 25p
Answer: 25p

9 Pattern sequences

The diagram shows the first three patterns in a sequence made by Sam.
Each pattern is made from dots.
How many dots are in Pattern 6?

Each pattern is a square: 1 × 1, 2 × 2, 3 × 3
Pattern 6 is 6 × 6 = 36
Answer: 36

10 Order of operations

Work out 6 + 3 × 5.

Multiply first
3 × 5 = 15
6 + 15 = 21
Answer: 21