Day 260 **C Tier 10-a-day: Model Solutions**

1 The mean

Here are the marks in a test.
7 11 8 9 15
Work out the mean.

Add up the values: 7 + 11 + 8 + 9 + 15 = 50
Divide by 5: 50 ÷ 5 = 10
Answer: 10

2 Solving equations

Solve m − 10 = 6

Add 10 to both sides
m = 6 + 10 = 16
Answer: m = 16

3 Multiples

Write down the first four multiples of 3.

Multiples are the 3 times table
Answer: 3, 6, 9, 12

4 Collecting like terms

Simplify 2z − z

All the terms are in z, so just add or subtract the numbers in front of z
Answer: z

5 Time from distance and speed

A car travels 420 miles at 60 mph.
How long does the journey take?

Time = distance ÷ speed
420 ÷ 60 = 7
Answer: 7 hours

6 Midpoint of a line

A is the point (5, 1).
B is the point (11, 9).
Work out the coordinates of the midpoint of AB.

Find the number halfway between the x-coordinates: (5 + 11) ÷ 2 = 8
Find the number halfway between the y-coordinates: (1 + 9) ÷ 2 = 5
Answer: (8, 5)

7 Missing numbers

Find the missing number.
? − 31 = 39

39 + 31 = 70
Answer: 70

8 Shaded area

The diagram shows a rectangle with a smaller rectangle cut out of it.
Work out the area of the shaded part.
The diagram is not drawn accurately.

Big rectangle: 13 × 6 = 78
Small rectangle: 6 × 4 = 24
Shaded area: 78 − 24 = 54
Answer: 54 cm^2

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9 Substitution

Work out the value of 2(n + 2) when n = 9.

Brackets first: 9 + 2 = 11

2 × 11 = 22

Answer: 22

10 Division with remainders

57 stickers are shared equally between 6 children.

(a) How many does each child get?

(b) How many are left over?

57 ÷ 6 = 9 remainder 3

Answer: (a) 9 (b) 3