Day 348 **C Tier 10-a-day: Model Solutions**

1 Money: wages

Zara earns £7 for each hour of work.
Zara works for 4 hours.
How much does Zara earn?

£7 × 4 = £28
Answer: £28

2 Area of a triangle

The diagram shows a triangle.
Work out the area of the triangle.
The diagram is not drawn accurately.

Area of a triangle = base × height ÷ 2
5 × 6 = 30
30 ÷ 2 = 15
Answer: 15 cm^2

3 Bar charts

The bar chart shows the pets owned by some students.
Work out the total number of students.

8 + 11 + 14 + 6 = 39
Answer: 39

4 Ordering negative numbers

Write these numbers in order, starting with the smallest.
−1, 2, 7, −3, −2

Use a number line: negative numbers are smaller the further they are from 0
Answer: −3, −2, −1, 2, 7

5 Reflecting a point

The point P has coordinates (3, 5).
P is reflected in the line y = 9.
Write down the coordinates of the image of P.

The point is 4 from the line, so the image is 4 on the other side: 9 + 4 = 13
Answer: (3, 13)

6 Number puzzles

I think of a number.
I add 9.
My answer is 13.
What number did I think of?

Work backwards: subtract 9
13 − 9 = 4
Answer: 4

7 The range

Here are the numbers of goals scored by a team in some matches.
2 6 0 4 4
Work out the range.

Range = largest value − smallest value
6 − 0 = 6
Answer: 6

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8 The nth term

The nth term of a sequence is n + 9.
Write down the first three terms of the sequence.

Put n = 1, 2, 3 into n + 9
1 + 9 = 10, 2 + 9 = 11, 3 + 9 = 12
Answer: 10, 11, 12

9 Finding a missing value from the mean

The mean of five numbers is 8.
Four of the numbers are 4, 14, 13 and 6.
Work out the other number.

Total of all the numbers: 8 × 5 = 40
Total of those given: 4 + 14 + 13 + 6 = 37
40 − 37 = 3
Answer: 3

10 Forming and solving equations

Omar has x stickers.
A friend gives Omar 15 more stickers.
Omar now has 41 stickers.
(a) Write down an equation using x.
(b) Solve your equation to find how many stickers Omar had at the start.

(a) x + 15 = 41
(b) x = 41 − 15 = 26
Answer: (a) x + 15 = 41 (b) x = 26