Day 18 **C Tier 10-a-day: Model Solutions**

1 The median

Here are the ages of some children.
11 10 6 8 8 11 7 5 5
Work out the median.

Put the numbers in order: 5 5 6 7 8 8 10 11 11
The middle number is 8
Answer: 8

2 Writing expressions

Isla has n stickers.
Zoe has 4 more stickers than Isla.
Write an expression for the number of stickers that Zoe has.

4 more than n is n + 4
Answer: n + 4

3 Estimating measurements

Which is the best estimate for the mass of an adult?
700 kg 7 g 70 g 70 kg

Adults weigh tens of kilograms
The best estimate is 70 kg
Answer: 70 kg

4 The mean

Here are the times, in minutes, of some bus journeys.
10 14 27 9 30
Work out the mean.

Add up the values: 10 + 14 + 27 + 9 + 30 = 90
Divide by 5: 90 ÷ 5 = 18
Answer: 18

5 Translating a point

The point A has coordinates (4, 5).
A is moved 5 left and 6 down.
Write down the coordinates of the new point.

x-coordinate: 4 − 5 = −1
y-coordinate: 5 − 6 = −1
Answer: (−1, −1)

6 Money: totals

Kiran buys a sandwich and a drink.
A sandwich costs £1.10.
A drink costs £1.50.
Work out the total cost.

£1.10 + £1.50
110p + 150p = 260p = £2.60
Answer: £2.60

7 Proportion

5 bananas cost £4.50.
Work out the cost of 6 bananas.

Cost of one banana: 450p ÷ 5 = 90p
90p × 6 = 540p
540p = £5.40
Answer: £5.40

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8 Sequences

Here are the first four terms of a sequence.
3, 8, 13, 18
Is 47 a term in this sequence?
You must show your working.

The terms go up by 5 each time
Continue the sequence: 3, 8, 13, 18, 23, 28, 33, 38, 43, 48
47 is not in the list
Answer: No

9 Reflecting a point

The point P has coordinates (−5, 1).
P is reflected in the line x = −3.
Write down the coordinates of the image of P.

The point is 2 from the line, so the image is 2 on the other side: −3 + 2 = −1
Answer: (−1, 1)

10 Multiplying multiples of 10

Work out 30 × 6.

Work out 3 × 6 = 18
Then put the zeros back on
Answer: 180