Day 195 **C Tier 10-a-day: Model Solutions**

1 Translating a point

The point A has coordinates (−1, 5).
A is moved 5 right and 5 down.
Write down the coordinates of the new point.

x-coordinate: −1 + 5 = 4
y-coordinate: 5 − 5 = 0
Answer: (4, 0)

2 Writing expressions

Simplify 9 × p

Write the number first, then the letters in alphabetical order, with no × signs
Answer: 9p

3 Subtracting decimals

Work out 5.27 − 4.49.

Line up the decimal points
5.27 − 4.49 = 0.78
Answer: 0.78

4 Frequency tables

The table shows the number of brothers and sisters of each student in a class.
Write down the mode.

The mode has the highest frequency, which is 8
This is for 2 brothers and sisters
Answer: 2

5 Substitution

Work out the value of y − 9 when y = 13.

13 − 9 = 4
Answer: 4

6 Bar charts

The bar chart shows the ways some students travel to school.
How many more students for Bus than for Car?

Bus: 11 Car: 2
11 − 2 = 9
Answer: 9

7 Adding fractions

Work out $\frac{5}{8} - \frac{4}{8}$.

The denominators are the same, so subtract the numerators
5 − 4 = 1
Answer: $\frac{1}{8}$

8 Cost from perimeter

A rectangular field is 8 m long and 9 m wide.
Fencing costs £8 per metre.
Work out the cost of putting fence all the way round the field.

Perimeter = 8 + 9 + 8 + 9 = 34 m
Cost = 34 × £8 = £272
Answer: £272

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9 Rounding money

Round £2.10 to the nearest pound.

Look at the pence: 10 p
less than 50p, so round down
Answer: £2

10 Substitution into formulae

Use the formula T = 4l − 4w to work out the value of T when l = 6 and w = 1.

T = 4 × 6 − 4 × 1
= 24 − 4 = 20
Answer: T = 20