Day 309 **C Tier 10-a-day: Model Solutions**

1 Money: change

Maya buys lunch for £3.95.
Maya pays with a £10 note.
How much change does Maya get?

Change = £10 − £3.95
1000p − 395p = £6.05
Answer: £6.05

2 Angles on a straight line

Three lines meet at a point on a straight line.
Work out the size of angle x.
The diagram is not drawn accurately.

Angles on a straight line add up to 180°
80 + 65 = 145
180 − 145 = 35
Answer: x = 35°

3 Probability with dice

A fair six-sided dice is rolled.
Write down the probability of rolling
(a) a number less than 3
(b) a multiple of 4

(a) 2 out of 6 numbers: $\frac{2}{6} = \frac{1}{3}$

(b) 1 out of 6 numbers: $\frac{1}{6}$

Answer: (a) $\frac{1}{3}$ (b) $\frac{1}{6}$

4 Sequences

Here are the first four terms of a sequence.
22, 30, 38, 46
Write down the next term.

The terms go up by 8 each time
46 + 8 = 54
Answer: 54

5 Translating a point

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

x-coordinate: 5 + 6 = 11
y-coordinate: −5 − 6 = −11
Answer: (11, −11)

6 Ordering fractions

Write these fractions in order, starting with the largest.
$\frac{1}{8}, \frac{2}{8}, \frac{4}{8}$

The denominators are all 8, so compare the numerators
4, 2, 1 (numerators in order)

Answer: $\frac{4}{8}, \frac{2}{8}, \frac{1}{8}$

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7 Two-way tables

The two-way table shows some information.
Work out the missing number, shown by ?

The row total is 14 and the other number is 11
14 − 11 = 3
Answer: 3

8 Faces, edges and vertices

How many edges does a hexagonal prism have?

A hexagonal prism: 6 edges on each end plus 6 joining them: 6 + 6 + 6 = 18
Answer: 18

9 Squares and roots

Work out 12^2.

$12^2 = 12 \times 12$
$= 144$
Answer: 144

10 Substitution

Work out the value of 3(p + 7) when p = 6.

Brackets first: 6 + 7 = 13
3 × 13 = 39
Answer: 39