Day 305 **C Tier 10-a-day: Model Solutions**

1 Substitution

Work out the value of 6k when k = 2.

6k means 6 × k
6 × 2 = 12
Answer: 12

2 Pay rates

Isla is paid £14 for each hour of work.
Isla is paid £56 in total.
How many hours did Isla work?

£56 ÷ £14 = 4
Answer: 4 hours

3 Reading a clock

Write down the time shown on the clock.

The minute hand points to 6, which is 6 × 5 = 30 minutes past, and the hour hand has passed the 3
The time is 3:30
Answer: 3:30

4 Special sequences

Here are the first four terms of a sequence.
10, 15, 21, 28
Write down the next two terms.

The gaps go up by 1 each time: 5, 6, 7, ...
The next gap is 8, so 28 + 8 = 36
Then the gap is 9: 36 + 9 = 45
Answer: 36, 45

5 Adding fractions

Work out $\frac{6}{11} - \frac{3}{11}$.

The denominators are the same, so subtract the numerators
6 − 3 = 3
Answer: $\mathbf{\frac{3}{11}}$

6 Angles in parallel lines

Two parallel lines are crossed by a straight line.
Work out the size of angle x.
Give a reason for your answer.

The angles are on opposite sides of the transversal between the parallel lines, so they are alternate angles
Alternate angles are equal
x = 65°
Answer: x = 65° (alternate angles)

7 Function machines

Here is a function machine.
The output is 27.
Work out the input.

Work backwards using the opposite operations
27 − 15 = 12
12 − 7 = 5
Answer: 5

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8 Missing side from area

A rectangle has an area of 78 m^2.
Its length is 13 m.
Work out its width.

Area = length × width
78 = 13 × width
width = 78 ÷ 13 = 6
Answer: 6 m

9 Rounding

Write 192 to the nearest ten.

Look at the units digit, which is 2
2 is less than 5, so round down
Answer: 190

10 Pie chart angles

60 students were asked about their way of travelling to school.
5 of them walk to school.
The results are shown in a pie chart.
Work out the angle of the sector for those students.

360° ÷ 60 = 6° for each student
5 × 6° = 30°
Answer: 30°