Day 123 **C Tier 10-a-day: Model Solutions**

1 Reading a clock

The clock shows the time now.
(a) Write down the time shown.
(b) What time will it be in 40 minutes?

(a) The minute hand points to 4, which is 4 × 5 = 20 minutes past, and the hour hand has passed the 8, so the time is 8:20
(b) 8:20 + 40 minutes = 9:00
Answer: (a) 8:20 (b) 9:00

2 Probability of an event not happening

The probability that the bus is late is 0.1.
Work out the probability that this does not happen.

P(not) = 1 − P(event)
1 − 0.1 = 0.9
Answer: 0.9

3 Solving equations

Solve 8 + c = 20

Subtract 8 from both sides
c = 20 − 8 = 12
Answer: c = 12

4 Time

A film starts at 3:15 pm.
It lasts for 1 hour 40 minutes.
At what time does it finish?

3:15 pm + 1 hour = 4:15 pm
4:15 pm + 40 minutes = 4:55 pm
Answer: 4:55 pm

5 Rates

A café sells 20 coffees each hour.
How many hours does it take to reach 100 coffees?

100 ÷ 20 = 5
Answer: 5 hours

6 Multiplication

Work out 23 × 8.

20 × 8 = 160 and 3 × 8 = 24
160 + 24 = 184
Answer: 184

7 Sequences

Here are the first four terms of a sequence.
4, 2, 6, 8
Each term is found by adding the two terms before it.
Write down the next two terms.

6 + 8 = 14
8 + 14 = 22
Answer: 14, 22

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8 Angles between clock hands

The minute hand of a clock turns clockwise from the 2 to the 6.
Through what angle does it turn?

Each number gap on a clock is 360 ÷ 12 = 30°
From 2 to 6 is 4 gaps
4 × 30 = 120
Answer: 120°

9 Coordinates

ABCD is a rectangle.
A is the point (7, 5), B is the point (7, 2) and C is the point (5, 2).
Write down the coordinates of D.

AB is vertical so D has the same y-coordinate as A: 5
BC is horizontal so D has the same x-coordinate as C: 5
Answer: (5, 5)

10 Pie chart angles

120 students were asked about their favourite sport.
2 of them chose football.
The results are shown in a pie chart.
Work out the angle of the sector for those students.

360° ÷ 120 = 3° for each student
2 × 3° = 6°
Answer: 6°