Day 179 **C Tier 10-a-day: Model Solutions**

1 Factors

Write down all the factors of 40.

Find pairs that multiply to make 40
1 × 40, 2 × 20, 4 × 10, 5 × 8
Answer: 1, 2, 4, 5, 8, 10, 20, 40

2 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 2, which is 2 × 5 = 10 minutes past, and the hour hand has passed the 1, so the time is 1:10
(b) 1:10 + 40 minutes = 1:50
Answer: (a) 1:10 (b) 1:50

3 Reading straight line graphs

The graph shows the cost of printing photos.
(a) Work out the cost of printing 2 photos.
(b) Tara spends £4 printing photos. How many photos does Tara print?

(a) Go up from 2 on the bottom axis to the line, then across: £6
(b) Go across from 4 on the cost axis to the line, then down: 1
Answer: (a) £6 (b) 1

4 Finish time

A lesson starts at 1:10 pm.
It lasts 20 minutes.
At what time does the lesson end?

Add the minutes: 1:10 pm + 20 minutes = 1:30 pm
Answer: 1:30 pm

5 Number puzzles

Sam thinks of a number.
Sam subtracts 5.
The answer is 10.
What number did Sam think of?

Add 5 to 10
10 + 5 = 15
Answer: 15

6 Sharing in a ratio

Amir and Beth share 10 sweets in the ratio 4 : 1.
Work out how much each person gets.

Number of parts = 4 + 1 = 5
One part = 10 ÷ 5 = 2
Amir: 4 × 2 = 8 Beth: 1 × 2 = 2
Answer: Amir 8, Beth 2

7 Fractions, decimals and percentages

Write $\frac{7}{10}$ as a percentage.

Make the bottom 100: $\frac{7}{10} = \frac{70}{100}$

Answer: 70%

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8 Circles with an approximate pi

A circle has a diameter of 5 cm.
Work out its circumference.
Use $\pi = 3.14$

Circumference = $\pi \times$ diameter
$3.14 \times 5 = 15.7$
Answer: 15.7 cm

9 Pie chart angles

30 students were asked about their favourite subject.
6 of them chose science.
The results are shown in a pie chart.
Work out the angle of the sector for those students.

$360° \div 30 = 12°$ for each student
$6 \times 12° = 72°$
Answer: 72°

10 Simplifying fractions

Write $\frac{2}{12}$ in its simplest form.

Divide the top and bottom by 2
$\frac{2}{12} = \frac{1}{6}$
Answer: $\mathbf{\frac{1}{6}}$