Day 278 **C Tier 10-a-day: Model Solutions**

1 Tally charts

The tally chart shows the favourite sport of some students.
How many more students for Cricket than for Tennis?

Cricket: 6 Tennis: 4
6 − 4 = 2
Answer: 2

2 Types of angle

Write down the type of each angle.
Choose from: acute, right, obtuse, reflex.
(a) 15°
(b) 345°

(a) 15° is less than 90°, so it is acute
(b) 345° is more than 180°, so it is reflex
Answer: (a) acute (b) reflex

3 Sequences

Here are the first four terms of a sequence.
46, 39, 32, 25
Write down the next term.

The terms go down by 7 each time
25 − 7 = 18
Answer: 18

4 Adding fractions

Work out $\frac{2}{5} + \frac{1}{5}$.

The denominators are the same, so add the numerators
2 + 1 = 3
Answer: $\frac{3}{5}$

5 Timetables

The table shows part of a bus timetable.
Priya arrives at Museum at 08:37.
What is the time of the next bus from Museum?

Look along the Museum row for the first time after 08:37
The next bus is at 08:45
Answer: 08:45

6 Special sequences

Here are the first four terms of a sequence.
9, 90, 900, 9000
Write down the next term.

Each term is 10 times the one before
9000 × 10 = 90000
Answer: 90000

7 Shaded area

The diagram shows a rectangle with a smaller rectangle cut out of it.
Work out the area of the shaded part.
The diagram is not drawn accurately.

Big rectangle: 12 × 9 = 108
Small rectangle: 8 × 5 = 40
Shaded area: 108 − 40 = 68
Answer: 68 m^2

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8 Pattern sequences

The diagram shows the first three patterns in a sequence made by Ravi.
Each pattern is made from counters.
How many counters are in Pattern 7?

Pattern n is n rows of (n + 1): 1 × 2, 2 × 3, 3 × 4
Pattern 7 is 7 × 8 = 56
Answer: 56

9 Expected number

The probability that a seed grows is $\frac{2}{3}$.

Mia plants 12 seeds.
How many seeds would you expect to grow?

Expected number = probability × number of trials
$\frac{2}{3} \times 12 = 8$
Answer: 8

10 Division in context

Each coach holds 25 people.
57 people need a lift.
How many coaches are needed?

57 ÷ 25 = 2 remainder 7
The extra people need another coach
Answer: 3