Day 44 **C Tier 10-a-day: Model Solutions**

1 Which expression

Which of these means p divided by 2?

$p + 2$, p^2, $\frac{p}{2}$, $2p$

$p \div 2$ is written $\frac{p}{2}$

Answer: $\frac{p}{2}$

2 Angles in a right angle

The diagram shows a right angle split into two angles.
Work out the size of angle q.
The diagram is not drawn accurately.

The square corner is a right angle, which is 90°
$90 - 25 = 65$
Answer: q = 65°

3 Tally charts

The tally chart shows the pets owned by some students.
Write down the frequency for Cat.

Each group of 5 is 5 and any extra lines are added on
Cat: 1 group of 5 and $4 = 5 \times 1 + 4 = 9$
Answer: 9

4 Digit cards

Here are four digit cards:
[3] [2] [6] [4]
Use all four cards to make the largest possible 4-digit number.

Put the biggest digit in the thousands column, then the next biggest, and so on
Answer: 6432

5 Sharing in a ratio

Harry and Omar share 32 stickers in the ratio 3 : 1.
Work out how much each person gets.

Number of parts = 3 + 1 = 4
One part = $32 \div 4 = 8$
Harry: $3 \times 8 = 24$ Omar: $1 \times 8 = 8$
Answer: Harry 24, Omar 8

6 Writing expressions

Leah is n years old.
Priya is 5 years younger than Leah.
Write an expression for Priya's age.

5 years younger means take away 5: $n - 5$
Answer: $n - 5$

7 Time from distance and speed

A car travels 80 miles at 40 mph.
How long does the journey take?

Time = distance ÷ speed
$80 \div 40 = 2$
Answer: 2 hours

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8 Subtraction

Work out 489 − 320.

489 − 320 = 169

Answer: 169

9 The nth term

The nth term of a sequence is 6n + 2.
Write down the first three terms of the sequence.

Put n = 1, 2, 3 into 6n + 2
6 × 1 + 2 = 8
6 × 2 + 2 = 14
6 × 3 + 2 = 20

Answer: 8, 14, 20

10 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: 10 × 8 = 80
Small rectangle: 5 × 5 = 25
Shaded area: 80 − 25 = 55

Answer: 55 cm^2