Day 122 **C Tier 10-a-day: Model Solutions**

1 Types of triangle

A triangle has sides of length 8 cm, 7 cm and 8 cm.
What type of triangle is it?

Exactly two sides are equal (8 cm)
Answer: isosceles

2 Multiplication

Work out 38 × 5.

30 × 5 = 150 and 8 × 5 = 40
150 + 40 = 190
Answer: 190

3 Substitution

q = 7 and y = 6
Work out the value of
(a) 2q + y
(b) q − y

(a) 2 × 7 + 6 = 20
(b) 7 − 6 = 1
Answer: (a) 20 (b) 1

4 Money: change

Uzma buys a gift for £2.45.
Uzma pays with a £5 note.
How much change does Uzma get?

Change = £5 − £2.45
500p − 245p = £2.55
Answer: £2.55

5 Formulae in words

Here is a rule to work out the fare for a taxi journey.
Fare (£) = 8 × number of miles + 2
Work out the fare for a journey of 8 miles.

Fare (£) = 8 × 8 + 2
= 64 + 2 = 66
Answer: £66

6 Probabilities add up to 1

A spinner has four colours.
The table shows the probability of each colour.
The probabilities add up to 1.
Work out the missing probability.

Add the known probabilities: 0.35 + 0.05 + 0.3 = 0.7
1 − 0.7 = 0.3
Answer: 0.3

7 Timetables

The table shows the times of two buses.
Jo gets on Bus 1 at Ashby.
What time does Jo get to Cleve?

Read along the row for Cleve in the Bus 1 column
Answer: 09:00

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8 Probability with dice

A fair six-sided dice is rolled.
Write down the probability of rolling
(a) an even number
(b) a 6

(a) 3 out of 6 numbers: $\frac{3}{6} = \frac{1}{2}$

(b) 1 out of 6 numbers: $\frac{1}{6}$

Answer: (a) $\frac{1}{2}$ (b) $\frac{1}{6}$

9 The nth term

The nth term of a sequence is 4n + 3.
Work out the 11th term of the sequence.

Put n = 11 into 4n + 3
4 × 11 + 3 = 47
Answer: 47

10 Perimeter of a square from its area

A square lawn has an area of 100 m^2.
Work out the perimeter of the lawn.

Side × side = 100, so the side is 10 m (because 10 × 10 = 100)
Perimeter = 4 × 10 = 40
Answer: 40 m