Day 20 **C Tier 10-a-day: Model Solutions**

1 Probability words

Choose a word from the list to describe the probability of the event.
A fair six-sided dice is rolled. The score is less than 3.
impossible, unlikely, even chance, likely, certain

There are 2 numbers out of 6 that are less than 3
So the event is unlikely
Answer: unlikely

2 Number puzzles

Nina thinks of a number.
Nina subtracts 8.
The answer is 27.
What number did Nina think of?

Add 8 to 27
27 + 8 = 35
Answer: 35

3 Angles in a right angle

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

The square corner is a right angle, which is 90°
90 − 55 = 35
Answer: a = 35°

4 Percentages of amounts

Work out 10% of £280.

10% = $\frac{1}{10}$, so divide by 10
280 ÷ 10 = 28
Answer: £28

5 Angles in a triangle (words)

Triangle ABC has a right angle at A.
Angle B = 20°.
Work out the size of angle C.

The right angle is 90°
Angles in a triangle add up to 180°
180 − 90 − 20 = 70
Answer: 70°

6 Counting outcomes

A coin is flipped and a six-sided dice is rolled.
How many different outcomes are there?

2 outcomes for the coin and 6 for the dice
2 × 6 = 12
Answer: 12

7 Angles in a triangle

The diagram shows a triangle.
Work out the size of angle x.
The diagram is not drawn accurately.

Angles in a triangle add up to 180°
45 + 65 = 110
180 − 110 = 70
Answer: x = 70°

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8 Time

A football match starts at 8:15 pm.
It finishes at 8:55 pm.
How long does it last?

8:15 pm to 8:55 pm is 40 minutes
Answer: 40 minutes

9 Sampling

Ella wants to find out the favourite sport of students at a school.
Ella asks only boys in Year 9.
Give a reason why this sample may be biased.

Girls and other year groups are not included
Answer: Girls and other year groups are not included

10 Substitution

Work out the value of 4(m + 3) when m = 8.

Brackets first: 8 + 3 = 11
4 × 11 = 44
Answer: 44