Day 167 **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 greater than 3.
impossible, unlikely, even chance, likely, certain

There are 3 numbers out of 6 that are greater than 3
So the event is even chance
Answer: even chance

2 Sequences

Here is a sequence with one number missing.
13, ?, 17, 19, 21
Work out the missing number.

The terms go up by 2 each time
13 + 2 = 15
Answer: 15

3 The mean

Here are the shoe sizes of some students.
5 9 3 3 5
Work out the mean.

Add up the values: 5 + 9 + 3 + 3 + 5 = 25
Divide by 5: 25 ÷ 5 = 5
Answer: 5

4 Subtracting decimals

Work out 8.10 − 3.57.

Line up the decimal points
8.10 − 3.57 = 4.53
Answer: 4.53

5 Angles on a straight line

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

Angles on a straight line add up to 180°
40 + 90 = 130
180 − 130 = 50
Answer: x = 50°

6 Metric units

Change 9000 ml to litres.

1 litre = 1000 ml
9000 ÷ 1000 = 9
Answer: 9 litres

7 Expressions for perimeter

An equilateral triangle has sides of length l cm.
Write an expression for the perimeter of the shape.
Give your answer in its simplest form.

Perimeter = l + l + l
= 3l
Answer: 3l cm

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8 Angles between clock hands

The minute hand of a clock turns clockwise from the 8 to the 1.
Through what angle does it turn?

Each number gap on a clock is 360 ÷ 12 = 30°
From 8 to 1 is 5 gaps
5 × 30 = 150
Answer: 150°

9 Division in context

Each van holds 20 people.
52 people need a lift.
How many vans are needed?

52 ÷ 20 = 2 remainder 12
The extra people need another van
Answer: 3

10 Substitution

Work out the value of 6(y − 2) when y = 3.

Brackets first: 3 − 2 = 1
6 × 1 = 6
Answer: 6