Day 6 **C Tier 10-a-day: Model Solutions**

1 The mode

Here are the shoe sizes of some students.
5 5 6 8 5 7 7 4
Write down the mode.

The mode is the value that appears most often
5 appears 3 times
Answer: 5

2 Place value

Write down the value of the digit 2 in the number 7236.

The digit 2 is in the hundreds column
2 × 100 = 200
Answer: 200

3 Types of triangle

A triangle has sides of length 12 cm, 12 cm and 15 cm.
What type of triangle is it?

Exactly two sides are equal (12 cm)
Answer: isosceles

4 Money: change

Grace buys a snack for £17.15.
Grace pays with a £20 note.
How much change does Grace get?

Change = £20 − £17.15
2000p − 1715p = £2.85
Answer: £2.85

5 Solving equations

Solve d − 11 = 11

Add 11 to both sides
d = 11 + 11 = 22
Answer: d = 22

6 Travel graphs

The graph shows a journey. A bus travels from home to a shop and then back home.
(a) How far from home was the journey after 1 hour?
(b) Work out the total distance travelled.

(a) Read up from 1 on the time axis: 20 km
(b) To the shop and back: 20 + 20 = 40
Answer: (a) 20 km (b) 40 km

7 Pattern sequences

The diagram shows the first three patterns in a sequence made by Zoe.
Each pattern is made from counters.
How many counters are in Pattern 6?

Each pattern is a square: 1 × 1, 2 × 2, 3 × 3
Pattern 6 is 6 × 6 = 36
Answer: 36

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8 Prime numbers

Write down the prime number in this list.
11, 21, 35, 27

A prime number has exactly two factors, 1 and itself
21 = 3 × 7
35 = 5 × 7
27 = 3 × 9
Answer: 11

9 Cost from perimeter

A rectangular field is 11 m long and 10 m wide.
Fencing costs £10 per metre.
Work out the cost of putting fence all the way round the field.

Perimeter = 11 + 10 + 11 + 10 = 42 m
Cost = 42 × £10 = £420
Answer: £420

10 Probability of not getting a colour

A bag contains 5 black counters, 4 blue counters and 6 white counters.
One is taken at random.
Write down the probability that it is not black.

Number that are not black: 4 + 6 = 10
Total: 15
Probability = $\frac{10}{15} = \frac{2}{3}$
Answer: $\frac{2}{3}$