**Day 134** **C Tier 10-a-day: Model Solutions**

## 1 Writing expressions

Simplify 8 × m

Write the number first, then the letters in alphabetical order, with no × signs

**Answer: 8m**

## 2 Rounding

Write 9899 to the nearest thousand.

Look at the hundreds digit, which is 8
8 is 5 or more, so round up

**Answer: 10000**

## 3 Bar charts

The bar chart shows the favourite fruit of some students.
Which bar shows the mode?

The tallest bar is Orange, with 45

**Answer: Orange**

## 4 Perimeter on a square grid

The diagram shows a shape drawn on a square grid.
Each square has a side of length 1 m.
Work out the perimeter of the shape.

Count the length of each side going round the shape.
6 + 1 + 1 + 1 + 5 + 2 = 16

**Answer: 16 m**

## 5 Number puzzles

Hugo thinks of a number.
Hugo multiplies it by 6.
The answer is 24.
What number did Hugo think of?

Divide 24 by 6
24 ÷ 6 = 4

**Answer: 4**

## 6 Completing a table

The table shows the favourite fruit of 50 students.
Work out the number of students for Banana.

Add the known numbers: 17 + 5 + 17 = 39
50 − 39 = 11

**Answer: 11**

## 7 Area of a triangle

The diagram shows a triangle.
Work out the area of the triangle.
The diagram is not drawn accurately.

Area of a triangle = base × height ÷ 2
6 × 3 = 18
18 ÷ 2 = 9

**Answer: 9 $cm^2$**

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## 8 Prime numbers

Write down the prime number in this list.
11, 45, 39, 33

A prime number has exactly two factors, 1 and itself
45 = 3 × 15
39 = 3 × 13
33 = 3 × 11
**Answer: 11**

## 9 Volume and surface area of a cube

A cube has sides of length 3 m.
(a) Work out the volume of the cube.
(b) Work out the total surface area of the cube.

(a) Volume = 3 × 3 × 3 = 27
(b) Each face is a square of area 3 × 3 = 9
A cube has 6 faces: 6 × 9 = 54
**Answer: (a) 27 $m^3$ (b) 54 $m^2$**

## 10 Forming and solving equations

There are x children in a club.
8 children leave.
There are now 11 children in the club.
(a) Write down an equation using x.
(b) Solve your equation to find how many children were in the club at first.

(a) $x - 8 = 11$
(b) $x = 11 + 8 = 19$
**Answer: (a) $x - 8 = 11$ (b) $x = 19$**