**Day 104** **C Tier 10-a-day: Model Solutions**

## 1 Addition

Work out 576 + 372.

Add the hundreds, tens and units
576 + 372 = 948
**Answer: 948**

## 2 The mode

Here are the ages of some children.
8 6 12 10 5 13 13
Write down the mode.

The mode is the value that appears most often
13 appears 2 times
**Answer: 13**

## 3 Fractions of a shape

What fraction of the shape is shaded?

There are 6 equal parts
1 parts are shaded

Fraction shaded = $\frac{1}{6}$

**Answer:** $\frac{1}{6}$

## 4 Line graphs

The line graph shows the depth of water in a tank at different times.
Work out the increase in the depth of water between 11 am and 2 pm.

At 11 am: 9 cm At 2 pm: 16 cm
16 − 9 = 7
**Answer: 7 cm**

## 5 Sequences

Here are the first four terms of a sequence.
4, 8, 16, 32
(a) Write down the next term.
(b) Write down the rule for finding the next term.

(a) Each term is 2 times the one before
Next term = 64
(b) Multiply by 2 each time
**Answer: (a) 64 (b) Multiply by 2**

## 6 Average speed

A bus travels 100 km in 4 hours.
Work out its average speed.

Speed = distance ÷ time
100 ÷ 4 = 25
**Answer: 25 km/h**

## 7 Estimation

Estimate the value of 74 + 19 by rounding each number to the nearest 10.

74 rounds to 70 and 19 rounds to 20
70 + 20 = 90
**Answer: 90**

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## 8 Circles with an approximate pi

A circle has a diameter of 7 cm.
Use $\pi = 3$ to work out an estimate for its circumference.

Circumference = $\pi \times$ diameter
$3 \times 7 = 21$
**Answer: 21 cm**

## 9 Solving equations

Solve $\frac{n}{2} = 6$

$\frac{n}{2}$ means $n \div 2$, so multiply both sides by 2
$n = 6 \times 2 = 12$
**Answer: n = 12**

## 10 Perimeter of a square from its area

A square patio has an area of 81 $m^2$.
Work out the perimeter of the patio.

Side × side = 81, so the side is 9 m (because $9 \times 9 = 81$)
Perimeter = $4 \times 9 = 36$
**Answer: 36 m**