**Day 268** **C Tier 10-a-day: Model Solutions**

## 1 Writing numbers in words

Write the number 1994 in words.

Split the number: 1000 + 900 + 94

**Answer: one thousand nine hundred and ninety-four**

## 2 Writing expressions

Simplify z × q

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

**Answer: qz**

## 3 Division

Work out 150 ÷ 6.

6 × 25 = 150

So 150 ÷ 6 = 25

**Answer: 25**

## 4 Scaling a recipe

A recipe for a sponge cake for 5 people uses 75 ml of oil.
Work out how much oil is needed for 20 people.

20 people is 4 times as many as 5 people

75 × 4 = 300

**Answer: 300 ml**

## 5 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 + 70 = 115

180 − 115 = 65

**Answer: x = 65°**

## 6 Coordinates

(a) Write down the coordinates of point W.
(b) Which point has coordinates (−1, 2)?

(a) W is right 3 and up 3

(b) Go left 1 and up 2: this is point Q

**Answer: (a) (3, 3) (b) Q**

## 7 Travel graphs

The graph shows a journey. Tom walks from home to a shop and then back home.
(a) How far from home is the shop?
(b) For how many hours did the journey stop at the shop?

(a) The highest point of the graph is 6 km

(b) The graph is flat from 1 to 2 hours: 1 hour

**Answer: (a) 6 km (b) 1 hour**

## 8 Angles between clock hands

Work out the smaller angle between the hour hand and the minute hand of a clock at 4 o'clock.

There are 12 hours round a clock, so each hour is 360 ÷ 12 = 30°

At 4 o'clock the hands are 4 hours apart (going the short way: 4)

4 × 30 = 120

**Answer: 120°**

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## 9 Division with remainders

53 cards are shared equally between 6 children.
(a) How many does each child get?
(b) How many are left over?

53 ÷ 6 = 8 remainder 5
**Answer: (a) 8 (b) 5**

## 10 Equations of lines

A straight line passes through the points
(6, 2), (6, 7), (6, 8)
Write down the equation of the line.

Every point has x-coordinate 6, so the line is vertical
**Answer: x = 6**