

## Year 7 mathematics test

# Paper 1

## Calculator not allowed

First name \_\_\_\_\_

Last name \_\_\_\_\_

Class \_\_\_\_\_

Date \_\_\_\_\_

Please read this page, but do not open your booklet until your teacher tells you to start. Write your name, the name of your class and the date in the spaces above.

### Remember

- The test is 45 minutes long.
- You **must not** use a calculator for any question in this test.
- You will need: pen, pencil, rubber, ruler and tracing paper (optional).
- This test starts with easier questions.
- Try to answer all the questions.
- Write all your answers and working on the test paper – do not use any rough paper. Marks may be awarded for working.
- Check your work carefully.
- Ask your teacher if you are not sure what to do.

## Instructions

### Answers



This means write down your answer or show your working and write down your answer.

### Calculators



You **must not** use a calculator to answer any question in this test.

1

Write the missing numbers.

The first one is done for you.

$$1 \times \underline{100} = 100$$



$$2 \times \underline{\quad} = 100$$

$$4 \times \underline{\quad} = 100$$

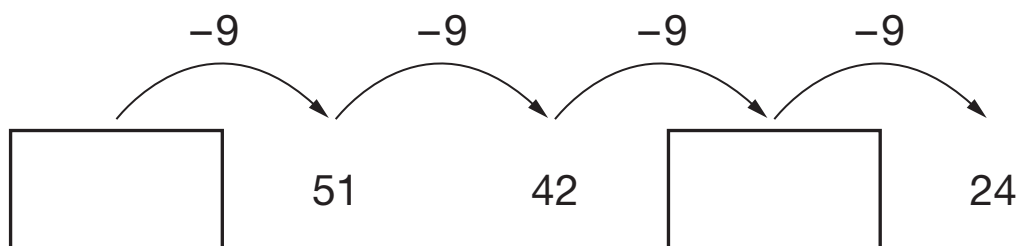
$$5 \times \underline{\quad} = 100$$

2 marks

2

Look at the number sequence below.

Write the missing numbers in the boxes.

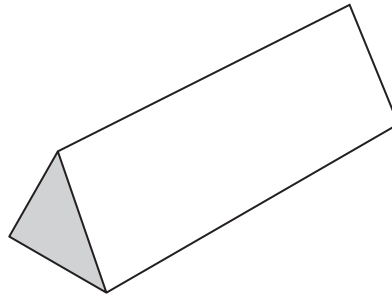


1 mark



3

The diagram shows a box that is a triangular prism.



- (a) The box has some faces that are **triangles**.

How many faces are triangles?



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1 mark

- (b) The other faces are not triangles.

What shape could the other faces be?

Put a ring round the correct answer below.



Rectangles

Pentagons

Hexagons

None of these

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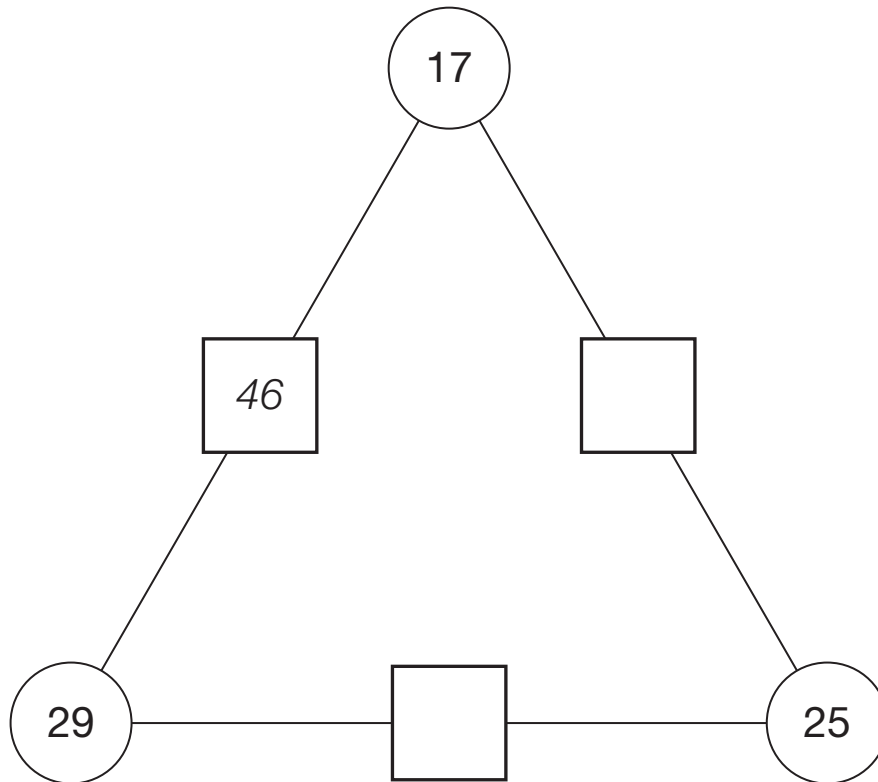
1 mark

4

The number in each square equals the **sum** of the two numbers on either side of it.

Write the missing numbers in the squares.

One is done for you.



1 mark

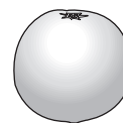
1 mark



5

Tick (✓) the best estimate for each of the following.

(a) The **mass** of an orange.

☐

150 millilitres

☐

150 litres

☐

150 grams

☐

150 kilograms

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1 mark

(b) The **volume** of drink in a can.

☐

330 millilitres

☐

330 litres

☐

330 grams

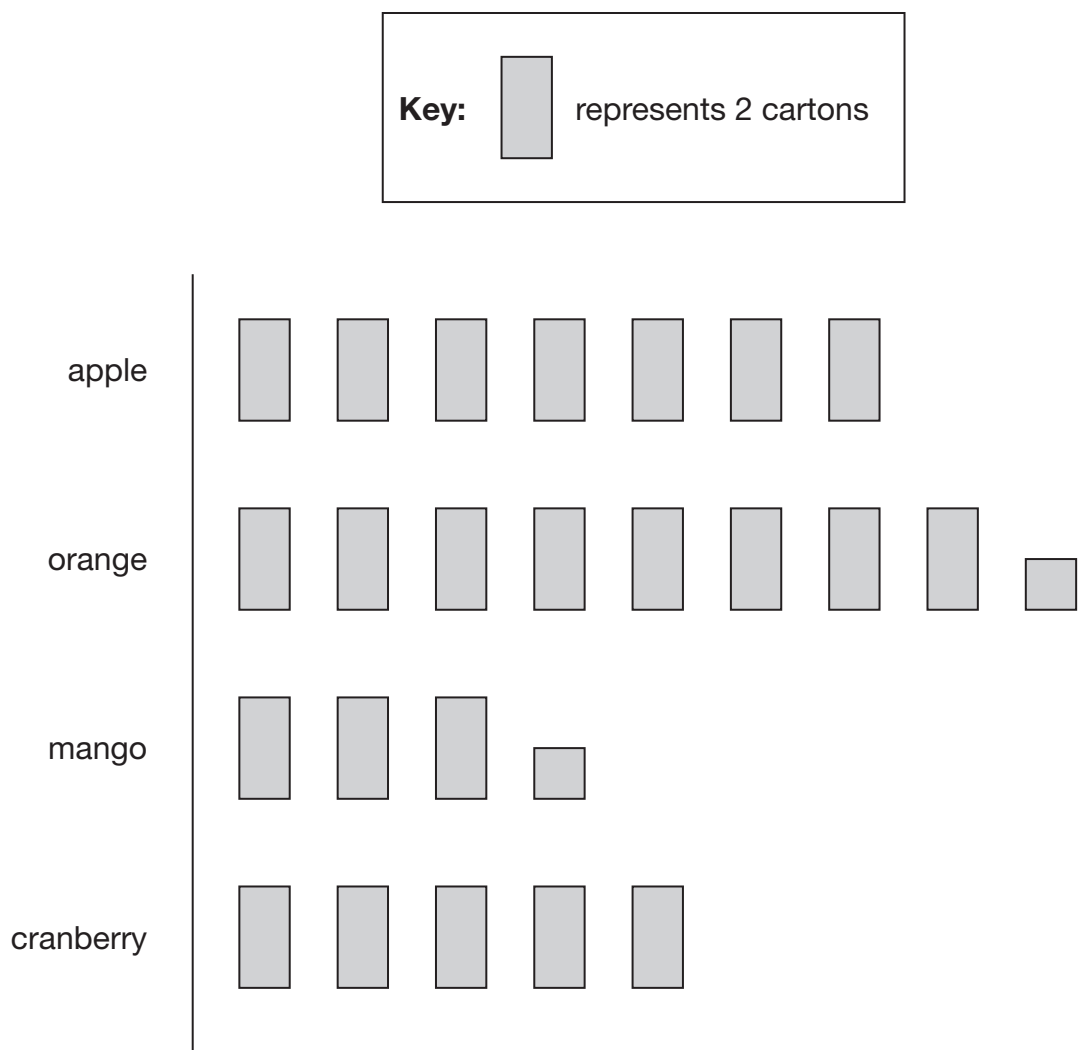
☐

330 kilograms

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1 mark

- 6 The pictogram shows how many cartons of fruit juice a shop sold on one day.



- (a) How many cartons of **apple** juice and **mango** juice were sold altogether?



\_\_\_\_\_

1 mark

- (b) More cartons of **orange** juice than **cranberry** juice were sold.

How many more?



\_\_\_\_\_

1 mark



7

Write the missing numbers.

  $38 + \boxed{\phantom{00}} = 65$

1 mark

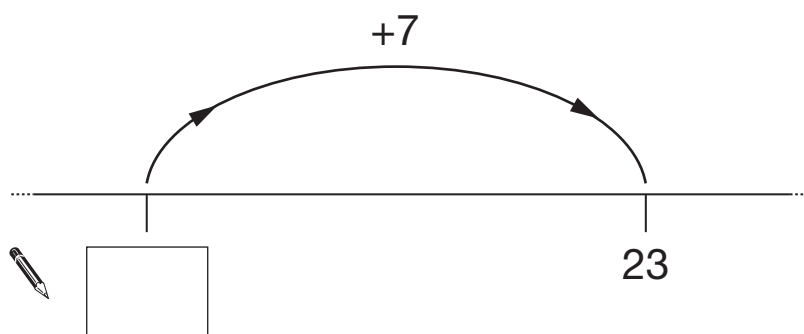
$47 - \boxed{\phantom{00}} = 29$

1 mark

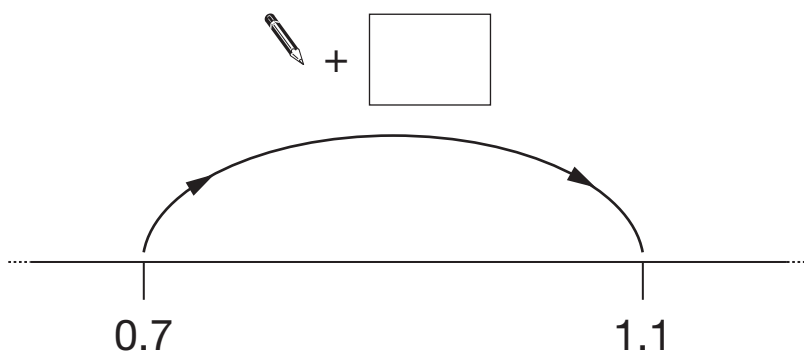
8

Look at the number lines below.

Write the missing numbers in the boxes.



1 mark



1 mark

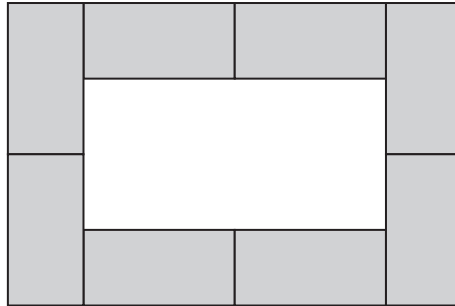


9

Mina has some rectangular tiles like this.



(a) She uses the tiles to make this shape.



What is the smallest number of tiles needed to cover the white rectangle in the middle of the shape?

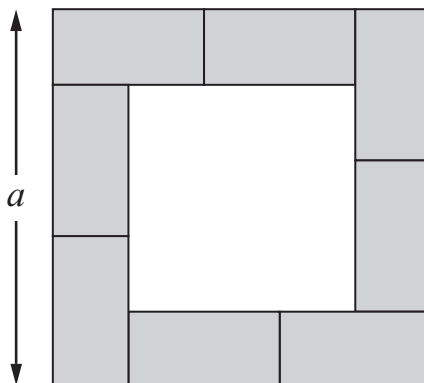
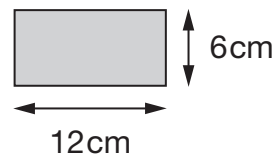


\_\_\_\_\_ tiles

1 mark

(b) Each tile is 12cm long and 6cm wide.

Mina uses the tiles to make the shape below.



Work out length  $a$



$a =$  \_\_\_\_\_ cm

1 mark



10

Some pupils go bowling.

- (a) It costs **£2.20** to play one game.

How much does it cost to play **3 games**?



£

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1 mark

- (b) The pupils play in groups.

There are **8** groups with **4** pupils in each group.

How many pupils are there altogether?



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pupils

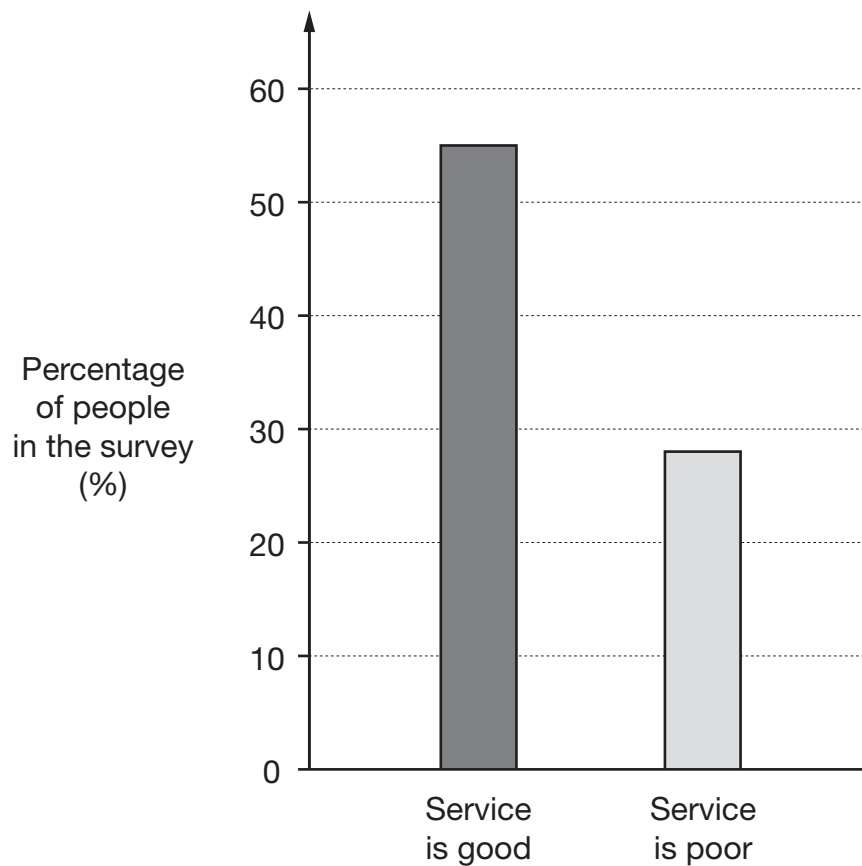
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1 mark

11

A company wanted to know how good its train service was.

It did a survey. The bar chart shows the results.



(a) About what percentage of people in the survey think the train service is good?



\_\_\_\_\_ %

1 mark

(b) Some people in the survey did **not** answer either 'good' or 'poor'.

These people are not shown on the bar chart.

About what percentage of people did **not** answer either 'good' or 'poor'?



\_\_\_\_\_ %

1 mark



- 12 (a) Erin has **50** cubes.

She puts them in **groups of 5**

How many groups can she make?



\_\_\_\_\_ groups

1 mark

- (b) Tom has **50** cubes.

He puts them in **groups of 12**

How many groups can he make and how many cubes will be left over?



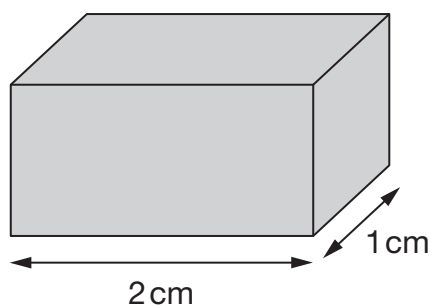
\_\_\_\_\_ groups and \_\_\_\_\_ cubes left over

2 marks

13

This cuboid is **2cm** long.

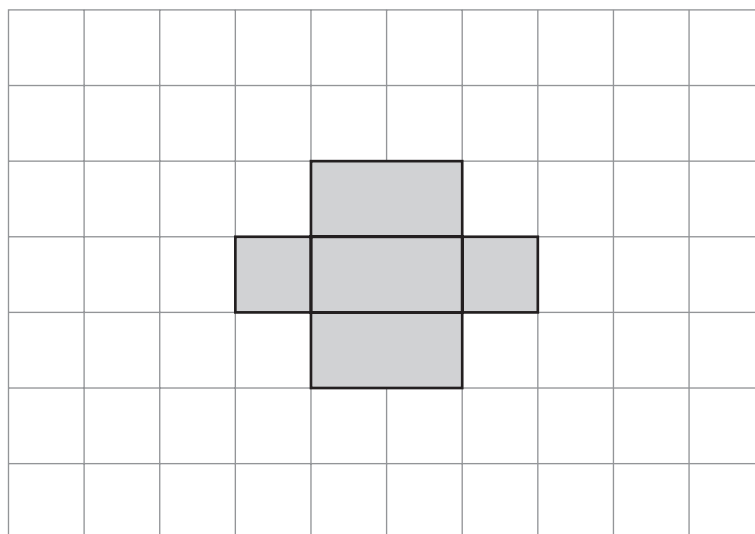
The end faces are **1cm** squares.



Not drawn  
accurately

Part of a net for the cuboid is drawn on the centimetre square grid.

Draw in the missing part of the net.



1 mark



14

Look at this calculation.

$$15 \times 6 = 90$$

Write the missing numbers in the boxes below.



$$15 \times \square = 180$$

1 mark



$$150 \times 6 = \square$$

1 mark

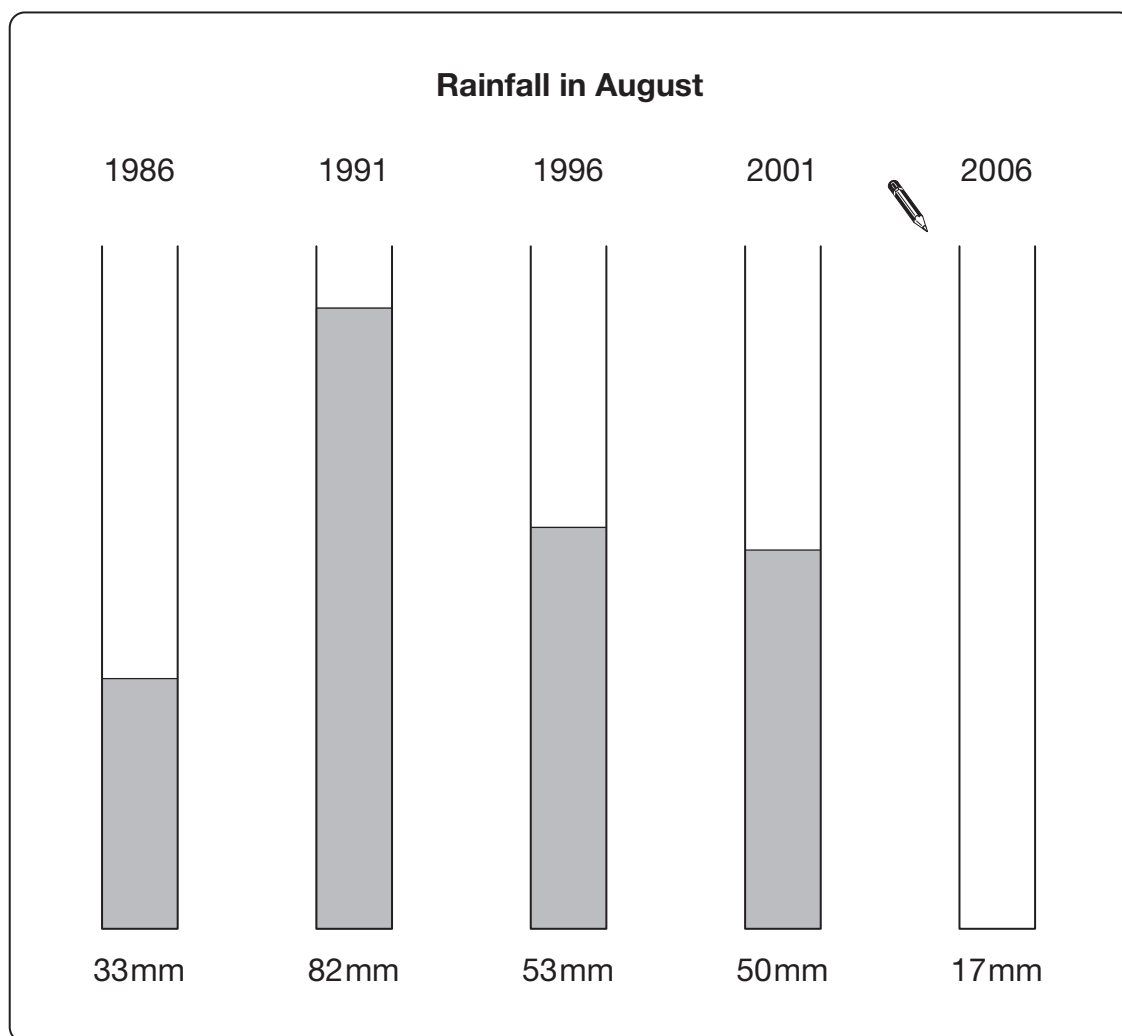


$$90 \div \square = 6$$

1 mark

15

The diagram shows how much rain fell in August in some years.



- (a) On the diagram, the rainfall in each year is **drawn accurately**.

Draw a line on the diagram to show that **17mm** of rain fell in August **2006**.

1 mark

- (b) The **average** rainfall in August for these years is **47mm**.

How much **more than the average** was the rainfall in August **1996**?



\_\_\_\_\_ mm

1 mark

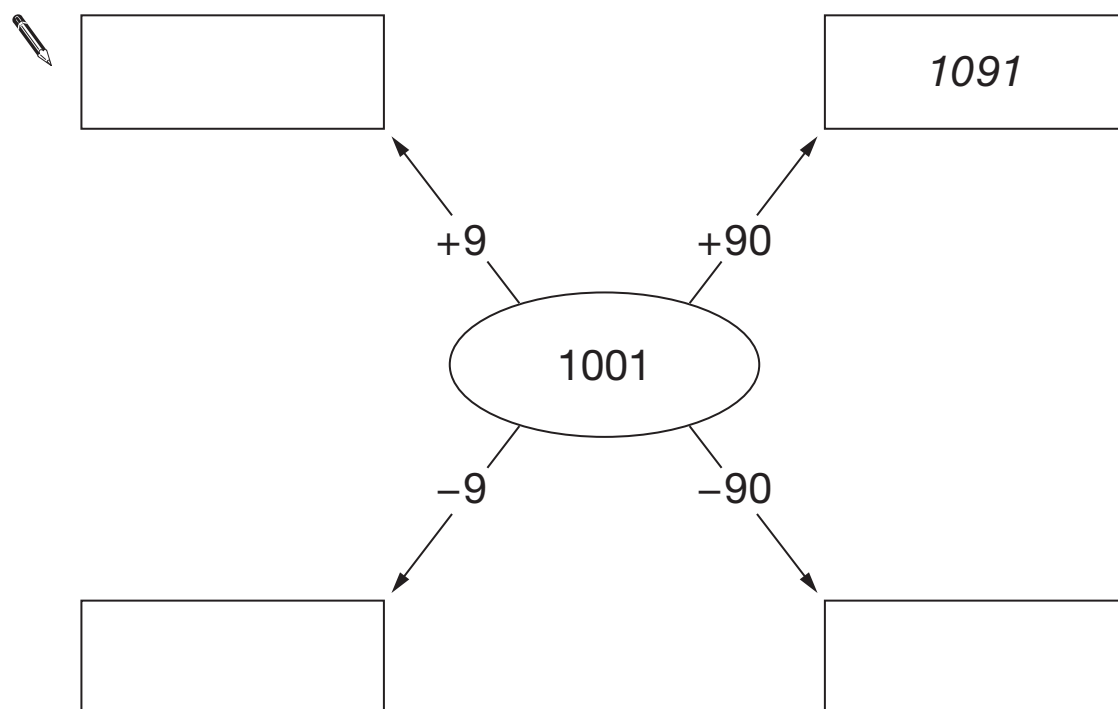


16

Look at the diagram.

Write the missing numbers in the boxes.

One is done for you.

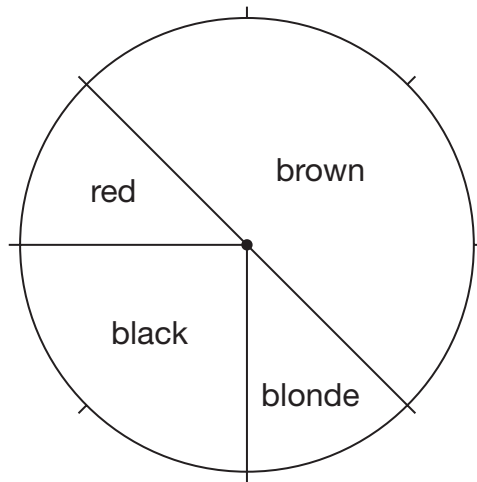


2 marks



17

The pie chart shows information about the hair colour of pupils in a class.



There are **32 pupils** in the class.

(a) How many pupils have **brown** hair?



\_\_\_\_\_

1 mark

(b) More pupils have **black** hair than **blonde** hair.

How many more?



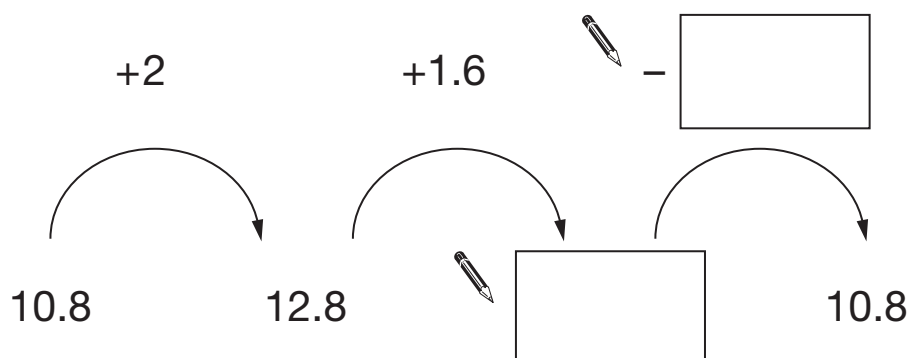
\_\_\_\_\_

1 mark



18

Write the missing numbers.



1 mark

1 mark

19

(a) Write numbers to complete the calculation.

$$\boxed{3} \times \boxed{\phantom{00}} \times \boxed{\phantom{00}} = 120$$

1 mark

(b) Now complete the calculation again.

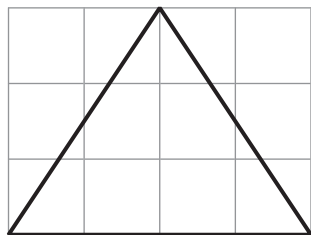
Both numbers must be **different** from the numbers you wrote in **part (a)**.

$$\boxed{3} \times \boxed{\phantom{00}} \times \boxed{\phantom{00}} = 120$$

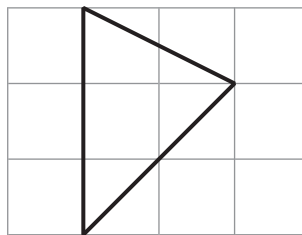
1 mark

20

Tom and Erin each draw a triangle on a grid.



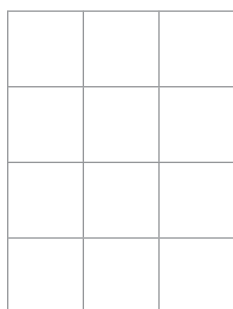
Tom's triangle



Erin's triangle

Then they each **turn** their grid and their triangle through **90° clockwise**.

Here are their grids after the turn. **Draw their triangles** after the turn.



Tom's triangle



Erin's triangle

2 marks



