Ma

KEY STAGE
2

LEVEL
6

2015

Mathematics

Paper 1

Calculator **not** allowed

First name	
Middle name	
Last name	
Date of birth	Day Month Year
School name	
DfE number	

D00130A0120

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Instructions

You **may not** use a calculator to answer any questions in this paper.

Work as quickly and as carefully as you can.

You have **30 minutes** for this test.

If you cannot do one of the questions, **go on to the next one**.

You can come back to it later, if you have time.

If you finish before the end, **go back and check your work**.

Follow the instructions for each question carefully.

This shows where you need to put the answer.

If you need to do working out, you can use any white space on a page.
Do not write over any barcode.
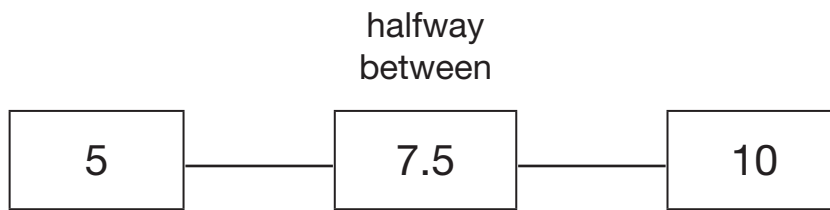
Some questions have an answer box like this:

Show
your
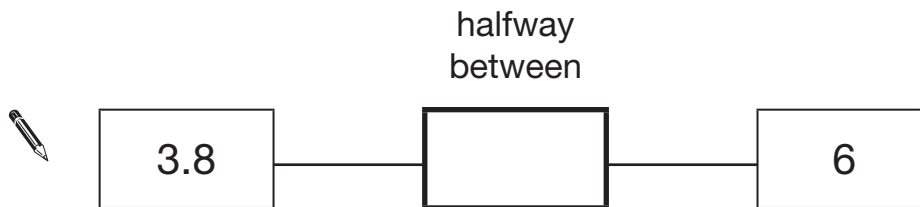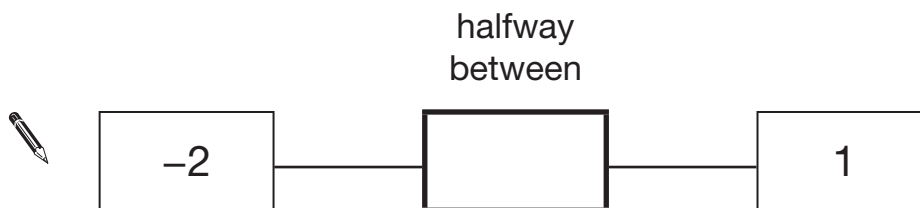working

For these questions you may get a mark for showing your working.

1   The number 7.5 is halfway between 5 and 10

halfway
between

| 5 | — | 7.5 | — | 10 |

Write in the missing numbers.

halfway
between

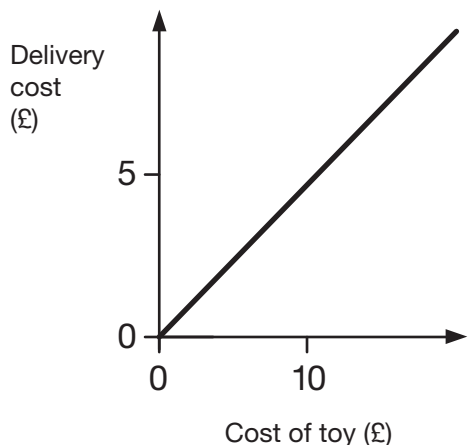| 3.8 | — | | — | 6 |

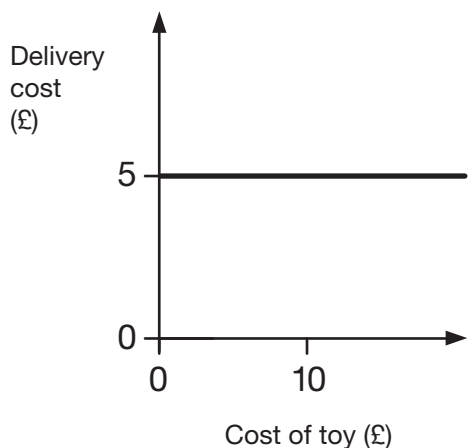halfway
between

| −2 | — | | — | 1 |

2 Two companies sell toys online. They charge to deliver.

Describe the delivery cost of the second company.

The first company is done for you.

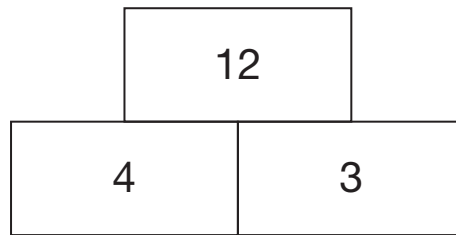The more a toy costs, the more

the delivery costs.

_____

1 mark

3 In this tower, two numbers are **multiplied** to give the number above.

```
        ┌───────────┐
        │    12     │
    ┌───┴───┬───────┴───┐
    │   4   │     3     │
    └───────┴───────────┘
```

Write the missing numbers in the tower below to make it correct.

```
            ┌───────────┐
            │           │
        ┌───┴───┬───────┴───┐
        │  75   │    24     │
    ┌───┴───┬───┴───┬───────┴───┐
    │       │       │     4     │
    └───────┴───────┴───────────┘
```
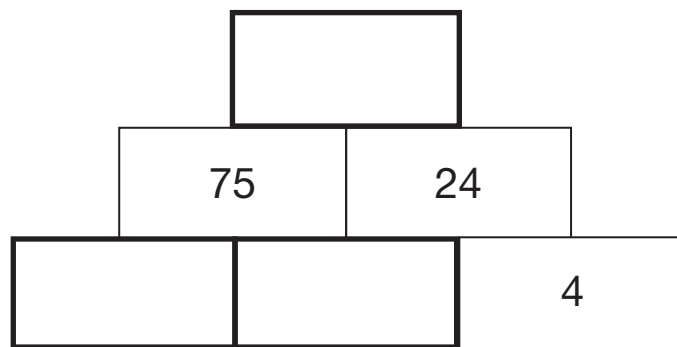
2 marks

4 200 girls and 100 boys were asked about their favourite meal.

These pie charts show the results.

fish and chips
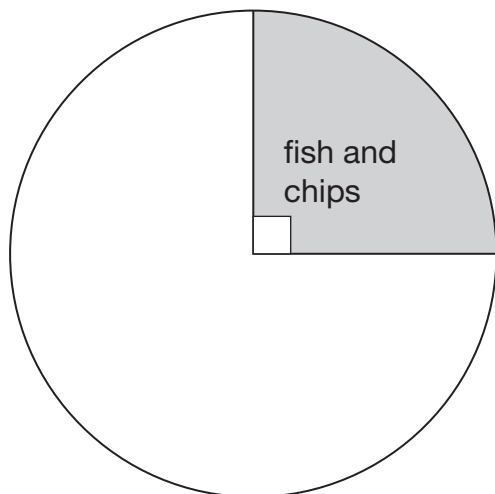
fish and chips

200 girls
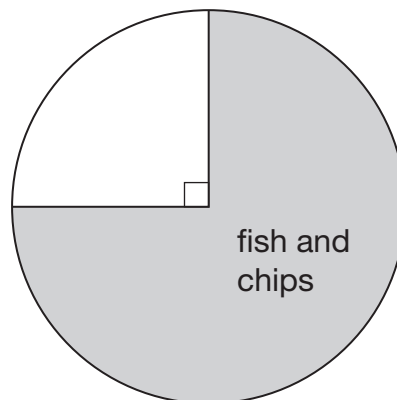
100 boys

Look at the pie charts.

For each statement put a tick (✓) if it is true or a cross (✗) if it is false.

Three-quarters of the boys chose fish and chips.

Three times as many boys as girls chose fish and chips.

Altogether, half of the children chose fish and chips.
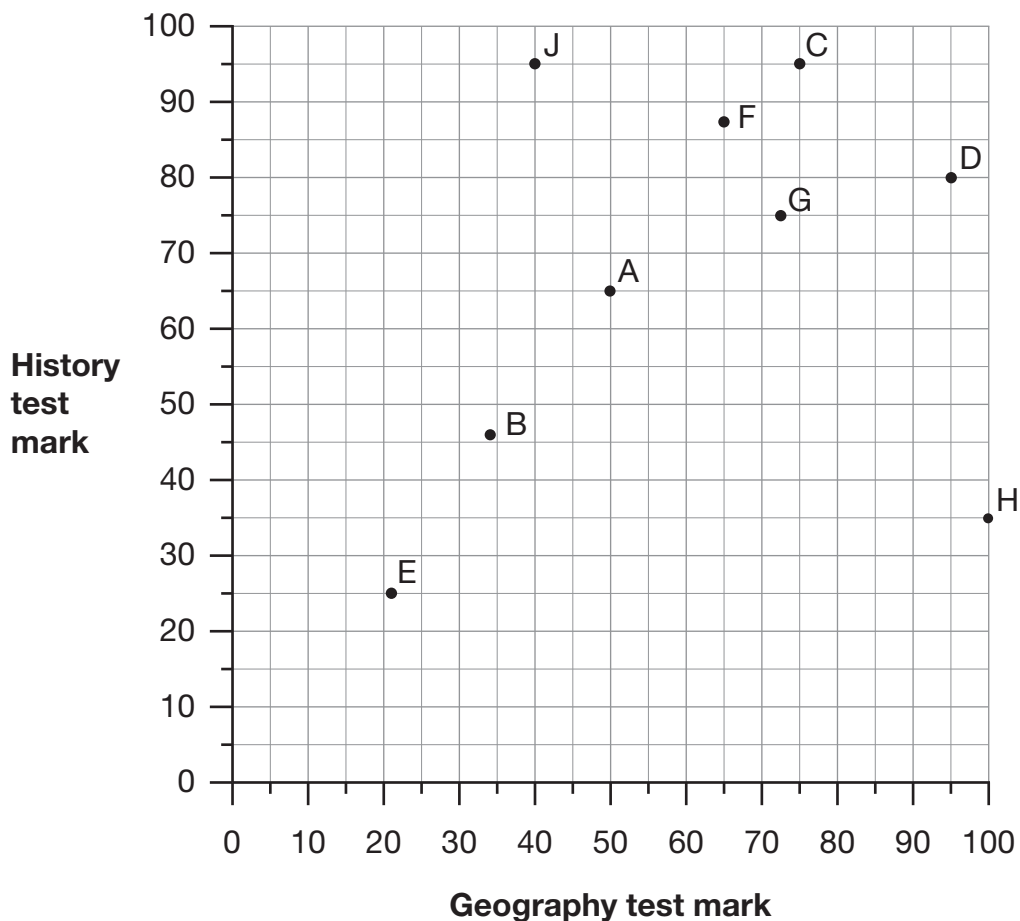
25 more boys than girls chose fish and chips.

2 marks

5 The scatter graph shows the test results for nine children.

Each letter stands for one child.

(a) What is the **range** of history marks for these children?

(b) What is the **median** geography mark for these children?

6 Here is an equation.

$$k = 100 - 4n$$

(a) Find the value of k when $n = 60$

$k =$ [ ]
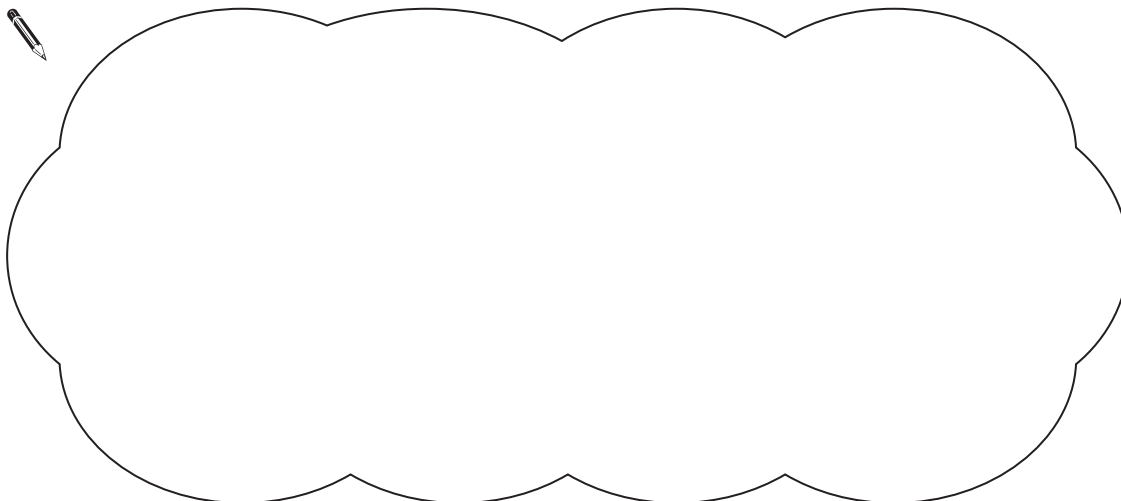
(b) Find the value of n when $k = 99$

$n =$ [ ]

7 Anna has 10 number cards in a bag.

$$\boxed{1}\ \boxed{2}\ \boxed{3}\ \boxed{4}\ \boxed{5}\ \boxed{6}\ \boxed{7}\ \boxed{8}\ \boxed{9}\ \boxed{10}$$

She is going to take out one of the cards at random.

(a) The probability that the number will be a **factor of 14** is $\dfrac{3}{10}$

Explain why.

1 mark

(b) Using the same number cards complete the sentence below.

The probability that the number will be a **factor of** _____ is $\dfrac{2}{5}$

1 mark

8 Megan uses four cubes to make this cuboid.
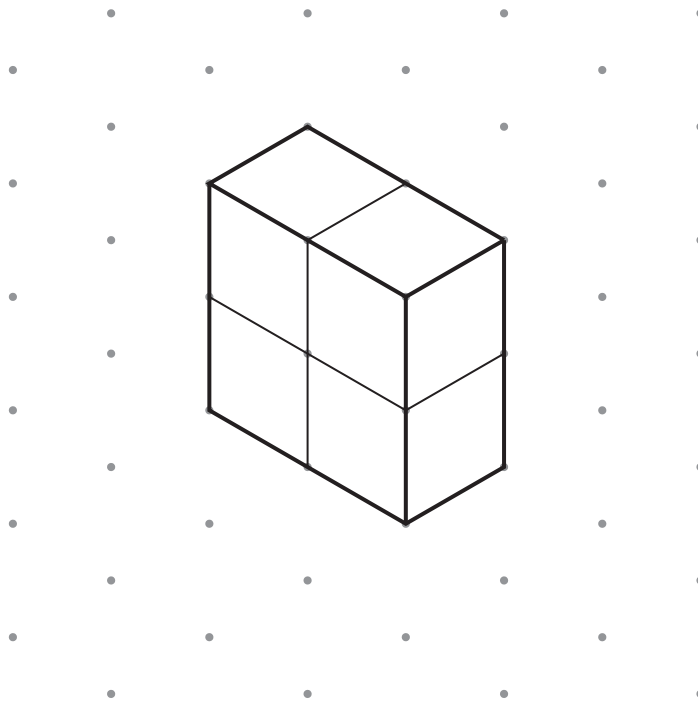
Then she takes one cube away, leaving the other cubes where they are.

Draw what the new shape could be.

1 mark

9 20% of the children in a sports club play tennis.

25% of the children who play tennis **also** play rounders.
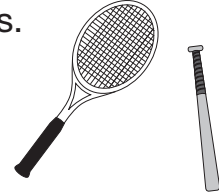
There are 8 children in the club who play **both** tennis and rounders.

How many children are there in the sports club **altogether**?

Show
your
working

2 marks

10

$$\frac{1}{4} \qquad \frac{1}{5} \qquad \frac{1}{10} \qquad \frac{1}{20} \qquad \frac{1}{40}$$

Use three of these fraction cards to complete the sum below.

$$\boxed{} + \boxed{} + \boxed{} = \frac{1}{2}$$

1 mark

11 The **area** of this square is $36\,\text{cm}^2$.

Not actual size

The square is cut into quarters to create 4 identical rectangles.
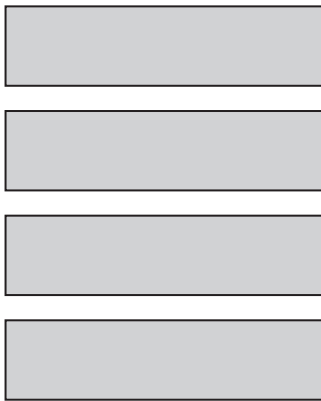
What is the **perimeter** of **one** of the small rectangles?

Show
your
working

cm

2 marks

D 0 0 1 3 0 A 0 1 4 2 0

12 Anna has four **different** triangles.

Complete the table to show the size of the angles in each triangle.

Type of triangle	Angle 1	Angle 2	Angle 3
Isosceles	90°		
Right-angled	80°		
Isosceles	70°		
Isosceles	70°		

2 marks

13 The graph shows the heights of 28 children in Alfie's class, to the nearest centimetre.
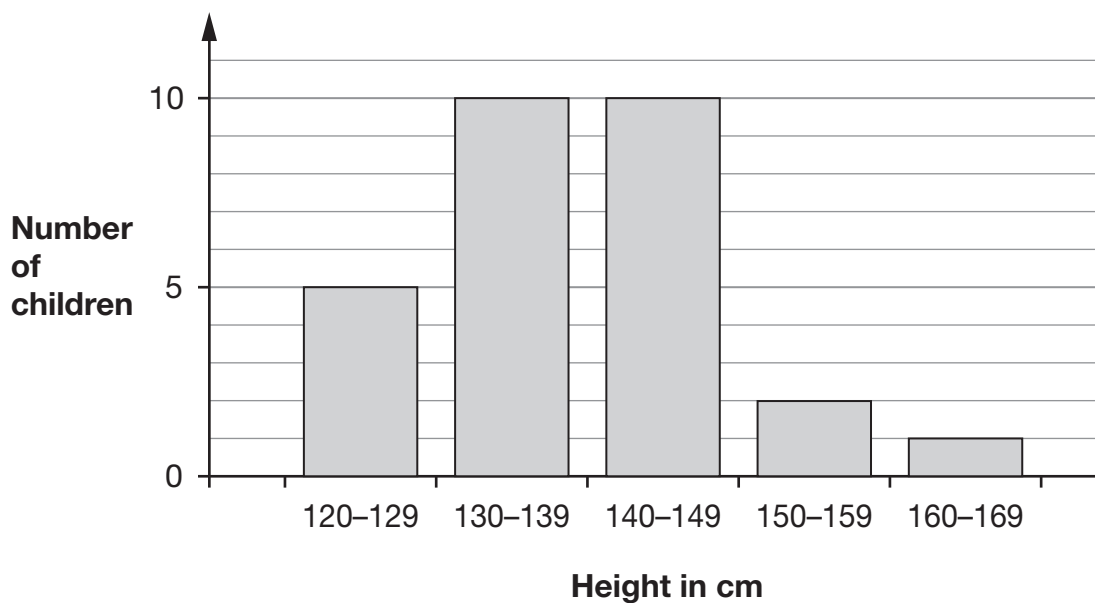
Alfie is 153 cm tall.

He says,

> *'Only one person in my class is taller than I am.'*

Emma says,

> *'You can't tell this from the graph.'*

Explain why Emma is correct.

1 mark

14 Solve this equation.

$$7y + 12 = 5y + 40$$

Show your working

$y =$ [   ]

2 marks

[END OF TEST]

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Standards & Testing Agency