

# Year 5 – End of Summer Term

(Meeting end of year expectations)

## Mathematics

### Paper 2: reasoning

First name	
Middle name	
Last name	

Total marks



## Instructions

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

### Questions and answers

You have approximately **40 minutes** to complete this test.

Follow the instructions for each question.

Work as quickly and as carefully as you can.

If you need to do any working out, you can use the space around the question.

**Some question have a method box like this:**

The diagram illustrates a 'method box' for showing working out. It consists of a rounded rectangle on the left containing the text 'Show your method'. To its right is a large grid of 20 columns and 10 rows, outlined in red. Within the bottom right area of this grid, there is a smaller rectangle outlined in blue, representing a designated space for a student's method.

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

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.

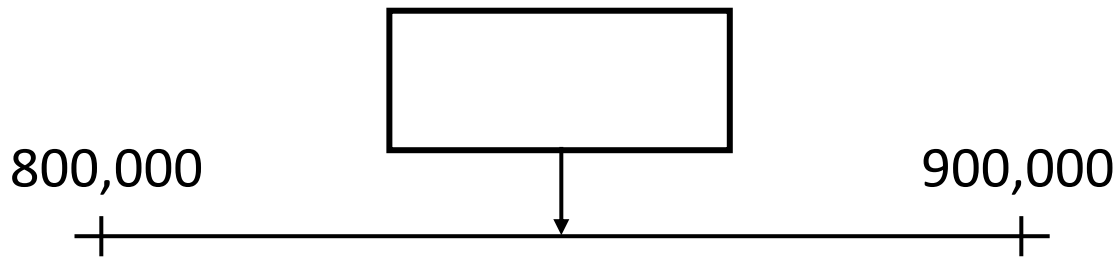
If you finish before the end, **go back and check your work**.

### Marks

The number under each line at the side of the page tells you the maximum number of marks available for each question.

1

Write the number that is **exactly halfway** between 800,000 and 900,000




1 mark

2

Here is a table of Ben's spelling test scores this term.

Week	Score out of 15
1	11
2	14
3	10
4	12
5	11
6	13
7	12
8	13
9	11

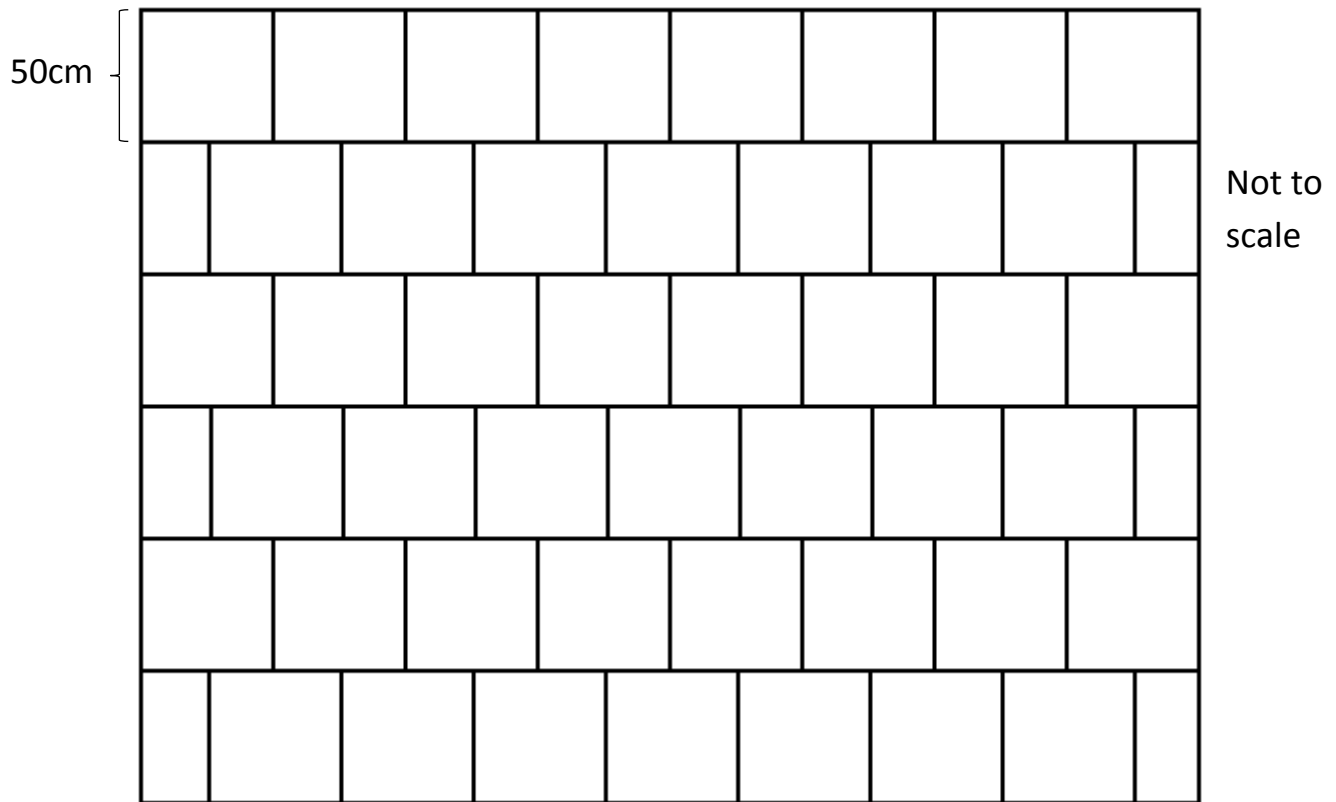
What is the Ben's **median** test score?



1 mark

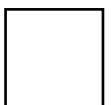
**3** Lin's parents have laid this patio.

Each paving square is 50cm x 50cm.



What is the total **area** of the patio in **m<sup>2</sup>**?

m<sup>2</sup>



1 mark

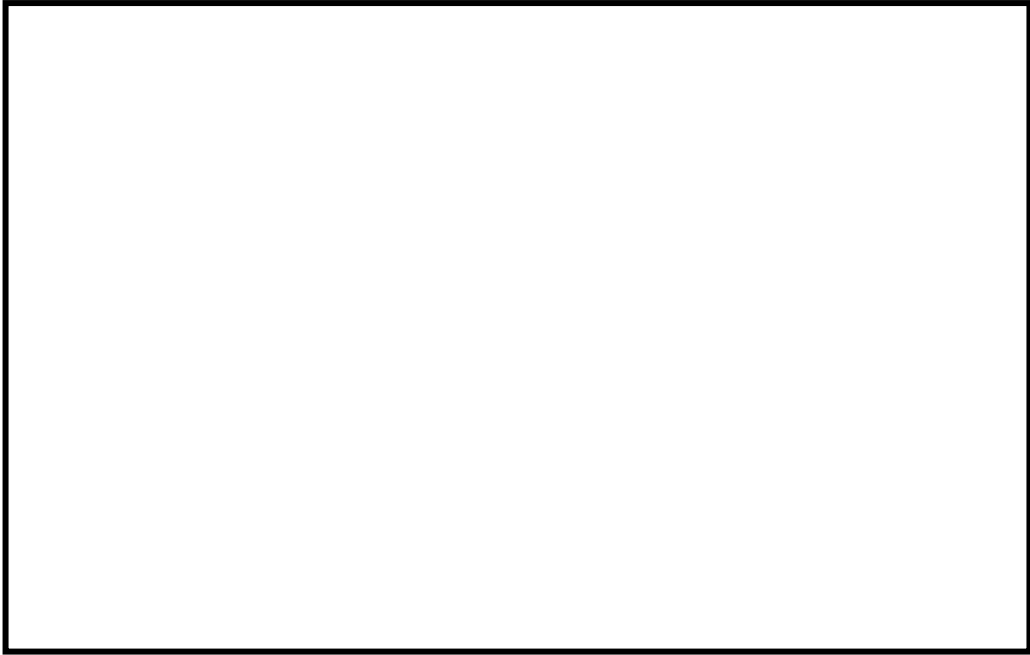
4

Circle the greater amount:

$$\frac{2}{3} \text{ of } 48$$

$$\frac{5}{6} \text{ of } 36$$

Explain how you know.

☐

2 marks

5

What is the value of the **digit 4** in 548,288?

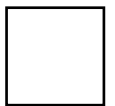
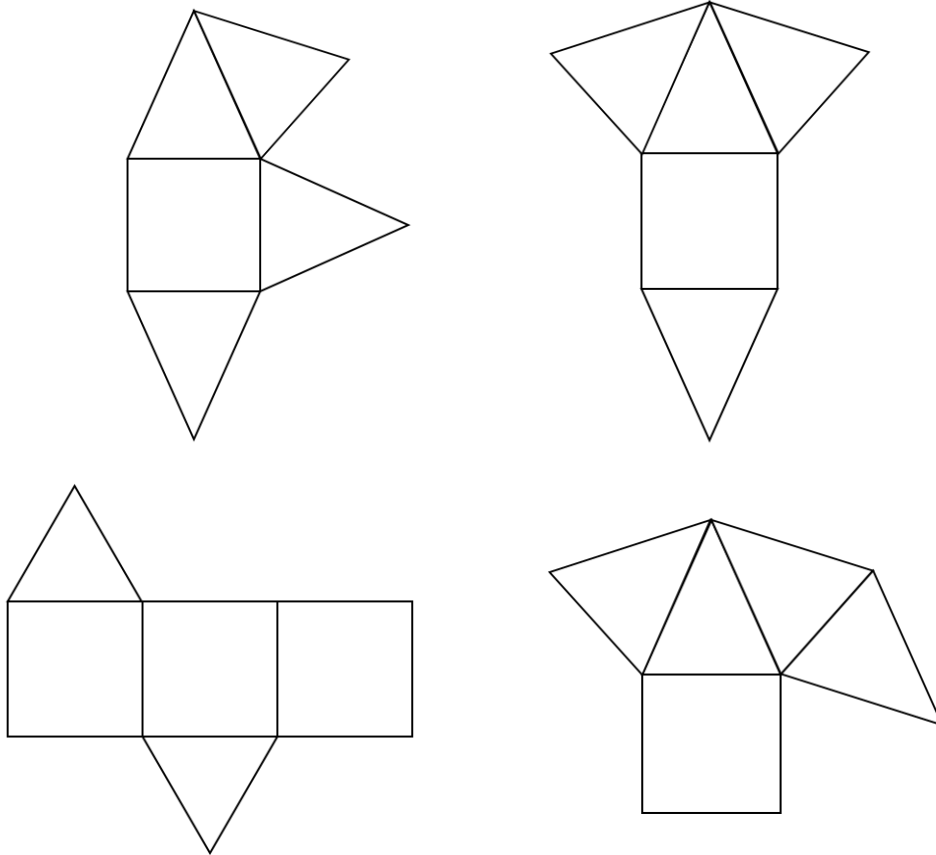
---

☐

1 mark

6

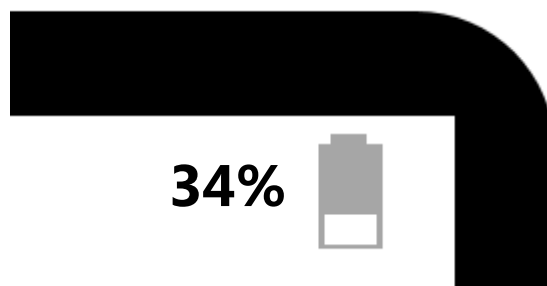
Which of these shapes is the net of a **square based pyramid**?



1 mark

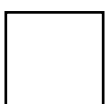
7

Kim's mobile phone has this much power **left** in the battery:



What percentage of the battery has been **used**?

%



1 mark

8

A shop is offering a 'meal deal' of a sandwich, a packet of crisps and a drink for £3

Sandwiches cost between £1.85 and £2.25

Packets of crisps cost between 55p and 65p

Drinks cost between 75p and £1.05

What is the **difference** between the **greatest and least amounts** of money that can be saved by buying the meal deal?

Show  
your  
method

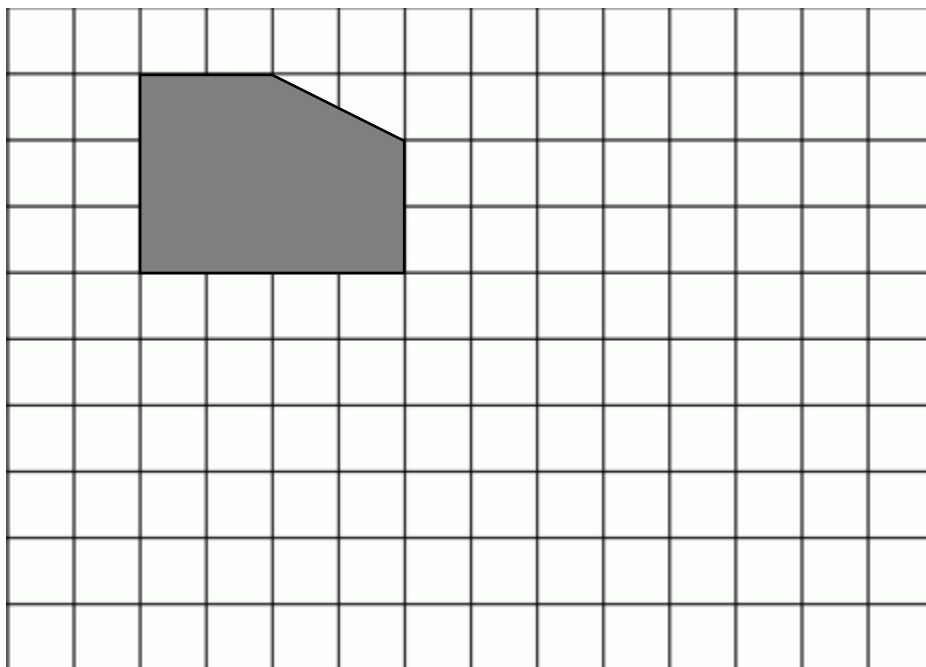
3 marks



9

The shape on the grid is translated 4 right and 3 down.

Draw the shape in its new position.



1 mark

10

The numbers in this sequence increase by the same amount each time.

Write the two missing numbers.

3.142

3.149

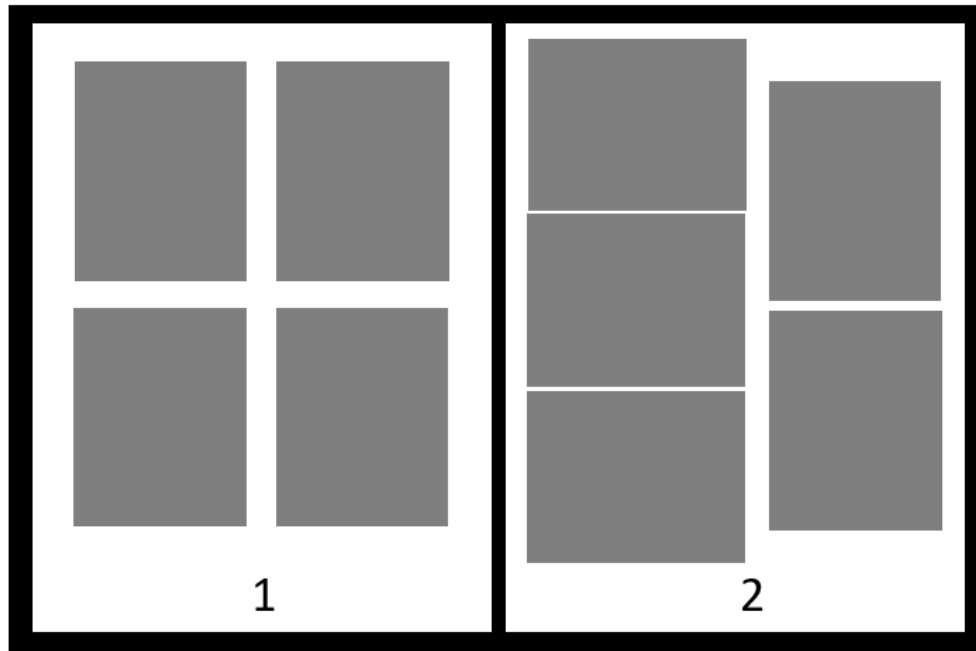
3.156



1 mark

11

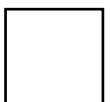
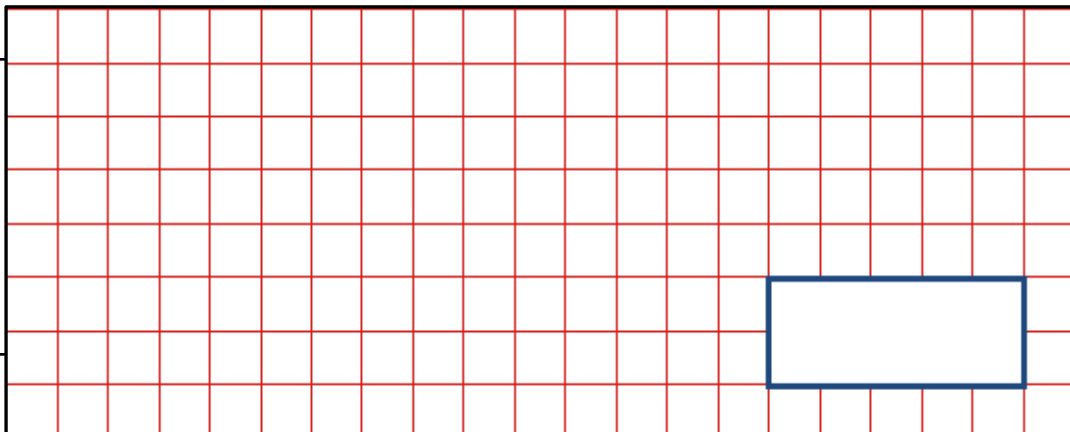
The photograph album below has **four** photographs on the left hand pages and **five** photographs on the right hand pages.



There are **12 pages** in the album.

How many **photographs** can the album hold in total?

Show  
your  
method



2 marks

12

Write the number in the box to complete the calculation.

$$624 \div 12 = 312 \div$$

--

1 mark

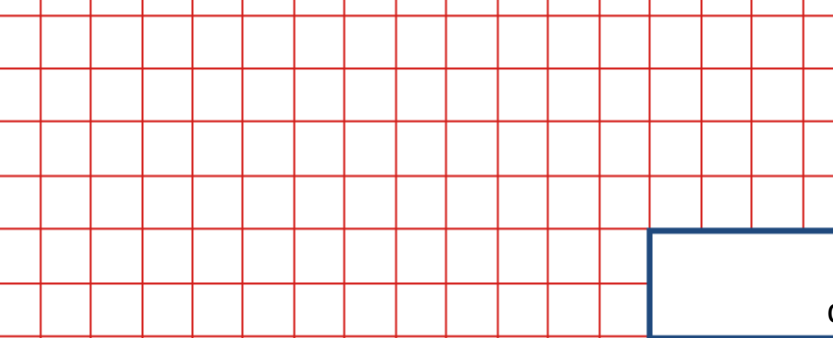
13

Leap years occur every **four years**.

2016 was the last leap year.

Sara celebrated her 11<sup>th</sup> birthday on 27<sup>th</sup> May 2017.

How many **days** had Sara been alive on her birthday?

A large rectangular area filled with a light blue grid pattern. The grid consists of small squares. A blue rectangular box is positioned in the bottom right corner of the grid. Inside this box, the word "days" is written in a black, sans-serif font. The entire grid area is enclosed by a thin blue border.

1 mark

14

This table shows a selection of the heaviest and longest vegetables ever grown in the United Kingdom.

vegetable	mass (kg)	length (m)
carrot	56.4	5.84
cucumber	12.4	1.07
parsnip	7.88	6.28
beetroot	23.36	6.67

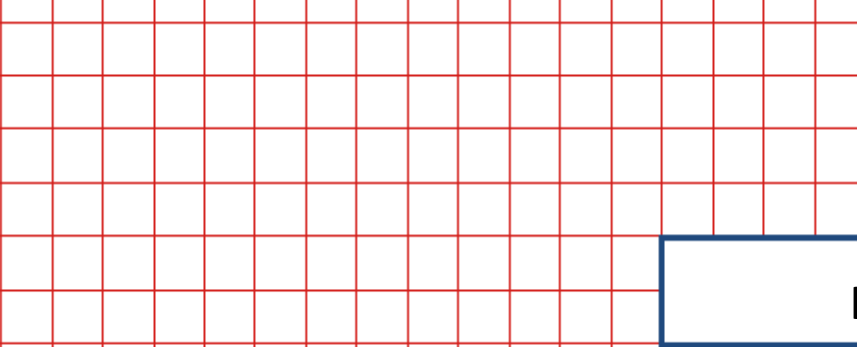
*Facts from allotment-diary.co.uk*

## Which vegetable is the **longest**?

---

1 mark

How much **heavier** is the carrot than the beetroot?

A 20x10 grid with a blue box containing 'kg' in the bottom right corner. The grid is composed of 20 columns and 10 rows of squares. A blue rectangular box is located in the bottom right corner, spanning 4 columns and 2 rows. Inside the box, the text 'kg' is written in black. The grid is otherwise empty.

1 mark

15

The temperature inside a fridge is  $4^{\circ}\text{C}$ .  
The temperature inside a freezer is  $-15^{\circ}\text{C}$ .

What is the **difference** between these two temperatures?

°C

1 mark

16

There are 32 children in Class 5 who are all going on a school trip to the cinema.

The cost of the coach and cinema ticket is £8 each.

They pay the coach driver £160 for the coach.

How much money is the cinema being paid?

Show  
your  
method

£

2 marks

**17**

Ben puts a number into his calculator.

He multiplies the number by 100 then halves this answer.

The result is 60.

What was Ben's original number?

☐

1 mark

**18**

Tick the calculation with the **greatest** answer.

$$62.6 + 5.42 \quad \square$$

$$60.6 + 5.22 \quad \square$$

$$62.8 + 5.41 \quad \square$$

☐

1 mark

19

This table shows the population of five cities in England.

city	population
Leeds	774,100
Liverpool	478,600
Manchester	530,300
Newcastle	292,900
Sheffield	569,700

The population of which city is **just over three quarters of a million people**?

---

1 mark

Which **two cities** would have a combined total **closest to one million** people?

Show  
your  
method

A full-page view of a blank sheet of graph paper. The grid consists of small squares formed by thin red lines. There are 20 columns and 15 rows of squares. A thicker black border runs along the top and left edges of the page.

--

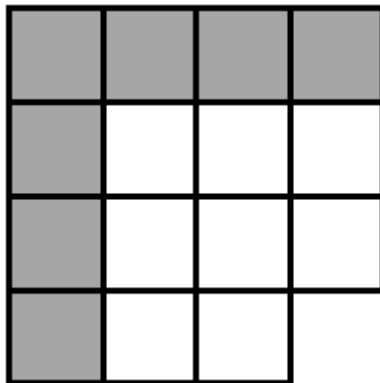
**and**

\_\_\_\_\_

2 marks

20

Shade some more squares in this shape so that  $\frac{4}{5}$  of the total shape is shaded.



1 mark

21

Use the line below and a protractor to draw an angle of  $125^\circ$ .

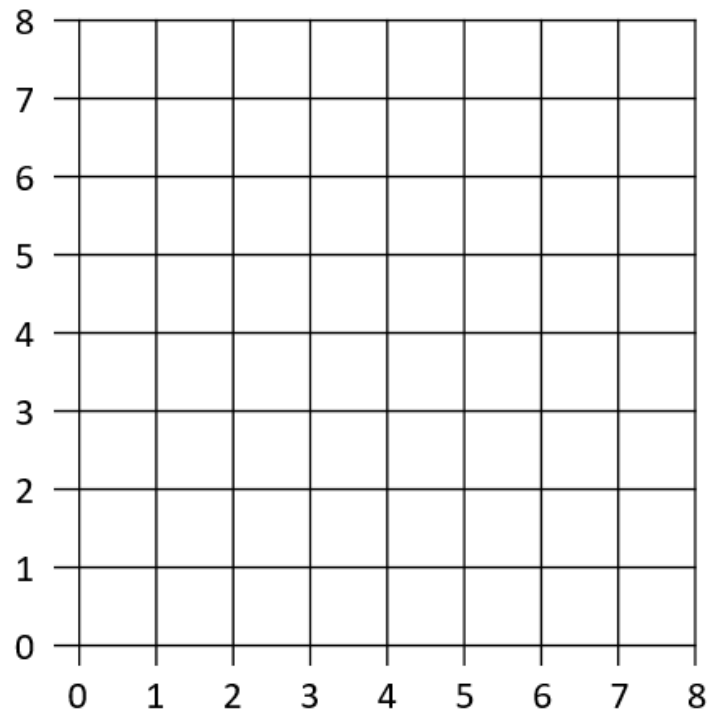


1 mark

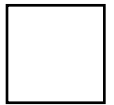


22

Here is a coordinate grid.



Put a cross (x) at each of the coordinates (3, 1) and (5, 6).



1 mark

These two coordinates are the vertices of an **isosceles triangle**.

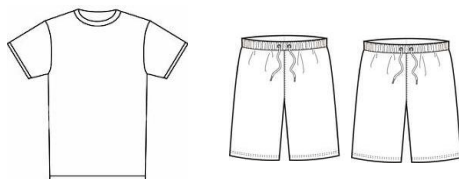
Put a cross (x) where the other vertex of the isosceles triangle could be.



1 mark

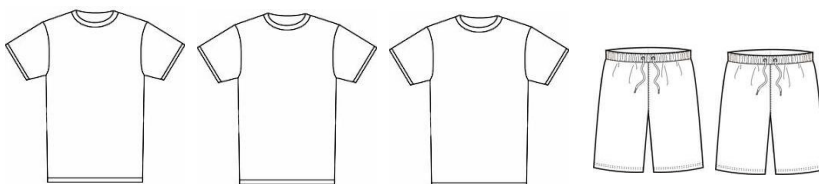
**23** Lin buys a T-shirt and two pairs of shorts.

This costs £18.10



Kim buys three T-shirts and two pairs of shorts.

This costs £35.90



How much does **one T-shirt** cost?

Show  
your  
method

£

7

2 marks

**24**

Match the numbers to the property labels.

**91**

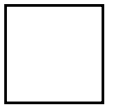
**prime number**

**121**

**square number**

**31**

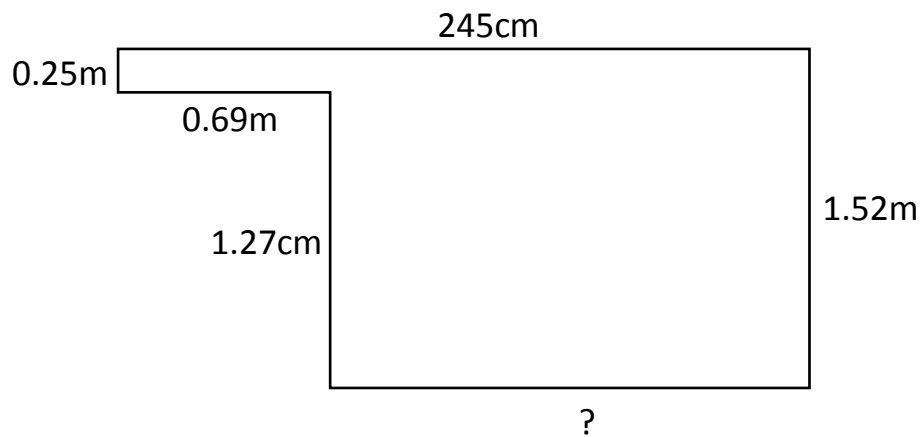
**multiple of 7**



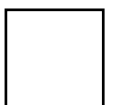
1 mark

**25**

Calculate the length of the missing side of this shape.



Not to  
scale



1 mark

**END OF TEST**