Ma

KEY STAGE 2

LEVELS 3–5

2012

Mathematics test

Test B

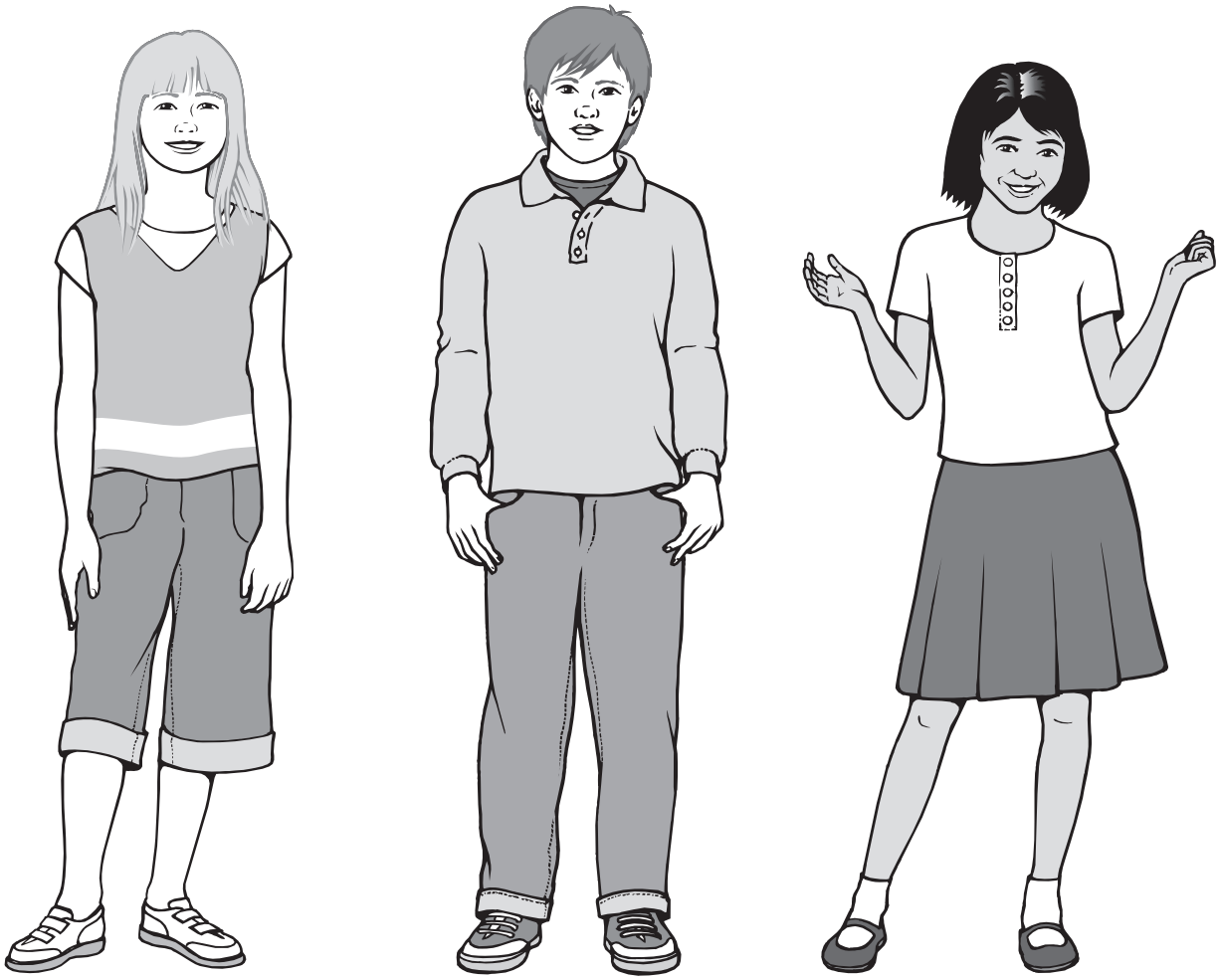
Calculator allowed

First name	
Middle name	
Last name	
School	
DfE number	

For marker's use only

Page	Marks
5	
7	
9	
11	
13	
15	
17	
19	
21	
23	
Total	

These three children appear in some of the questions in this test.



Kirsty Seb Mina

Instructions

You **may** use a calculator to answer any questions in this test.

Work as quickly and as carefully as you can.

You have **45 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.

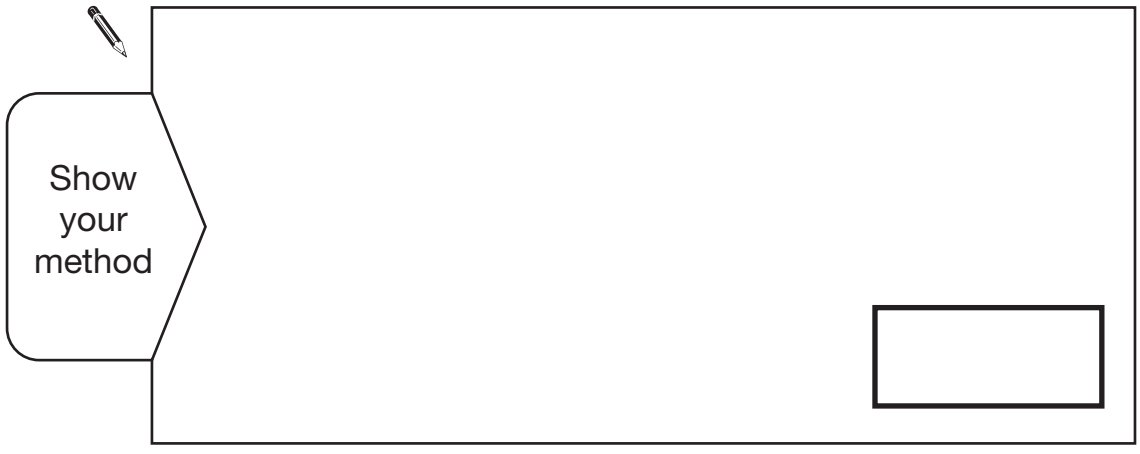
If you finish before the end, **go back and check your work**.

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 space on a page.

Some questions have an answer box like this:



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

1 Write the missing numbers.

57 + ☐ = 125

1a

1 mark

5 × ☐ = 175

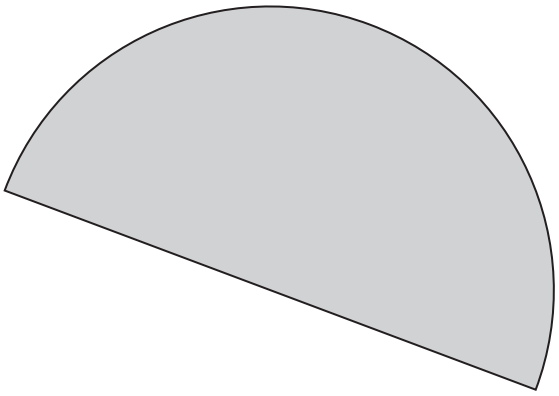
1b

1 mark

2 Here is a semi-circle.

Measure accurately the length of the straight edge.

Give your answer in **centimetres**.



☐ **cm**

2

1 mark

3 Mina and Seb share these coins so that they each have the **same** amount of money.

Mina chooses her coins first.

Seb takes the rest of the coins.

Which coins could Mina choose?

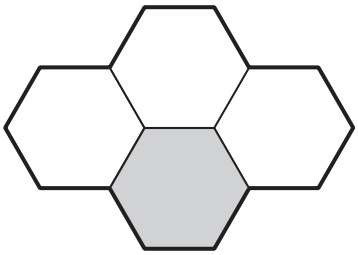
_____ 3

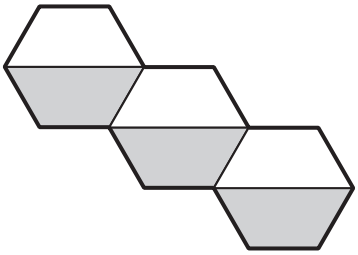
1 mark

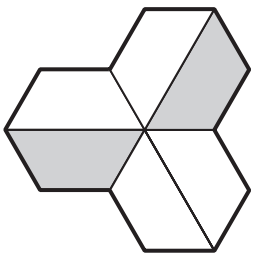
Total out of 4 _____

4 Here are three shapes made from regular hexagons.

Write the **fraction** of each shape that is shaded.







4i _____

4ii _____

2 marks

5 Here are five calculations.

For each, put a tick (✓) in the box if the answer is **greater than 450**
Put a cross (✗) if it is not.

One has been done for you.

	greater than 450
46×10	✓
$149 + 137 + 158$	
$911 - 447$	
$863 \div 2$	
$16 \times 28\frac{1}{2}$	

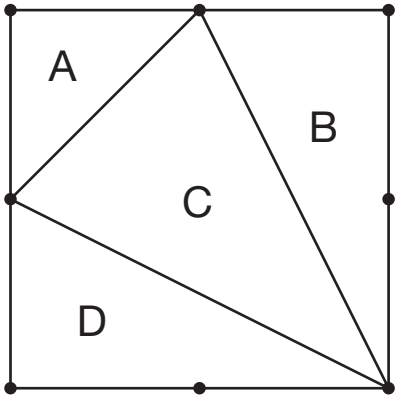
5i _____

5ii _____

2 marks

6 This diagram shows a square with dots at the vertices and at the middle of each side.

The square is divided into four triangles, **A**, **B**, **C** and **D**.



Write the letters of all the triangles that have a **right angle**.

_____ 6a

1 mark

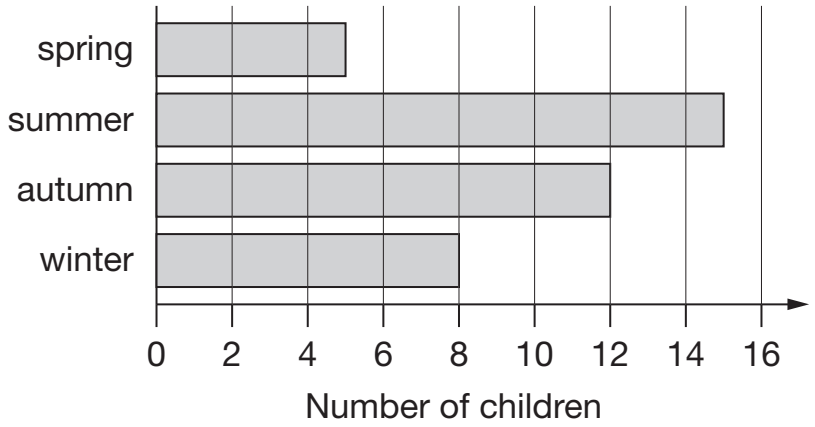
Write the letters of all the triangles that have **two equal sides**.

_____ 6b

1 mark

7 A survey was done to find out children's favourite season.

This chart shows the results.



How many more children chose autumn than chose spring?

7a

1 mark

Kirsty says,

'Exactly twice as many children chose summer as chose winter.'

Is Kirsty correct?
Circle **Yes** or **No**.

Yes / No

Explain how you know.

7b

1 mark

Total out of 4

8 The table below shows five journeys a taxi driver made one day.

journey number	start time	number of passengers	distance	cost
1	9:15 am	2	8 km	£7.50
2	9:40 am	1	12 km	£9.90
3	10:30 am	3	7 km	£7.60
4	10:50 am	1	21 km	£15.50
5	12:10 pm	4	15 km	£12.00

On journey number 5, the passengers shared the cost equally.

How much did **each** passenger pay?

£ 8a

1 mark

How many **passengers** made journeys of more than 10 km?

passengers 8b

1 mark

The 12 km journey took 40 minutes.

What time did the taxi finish its journey?

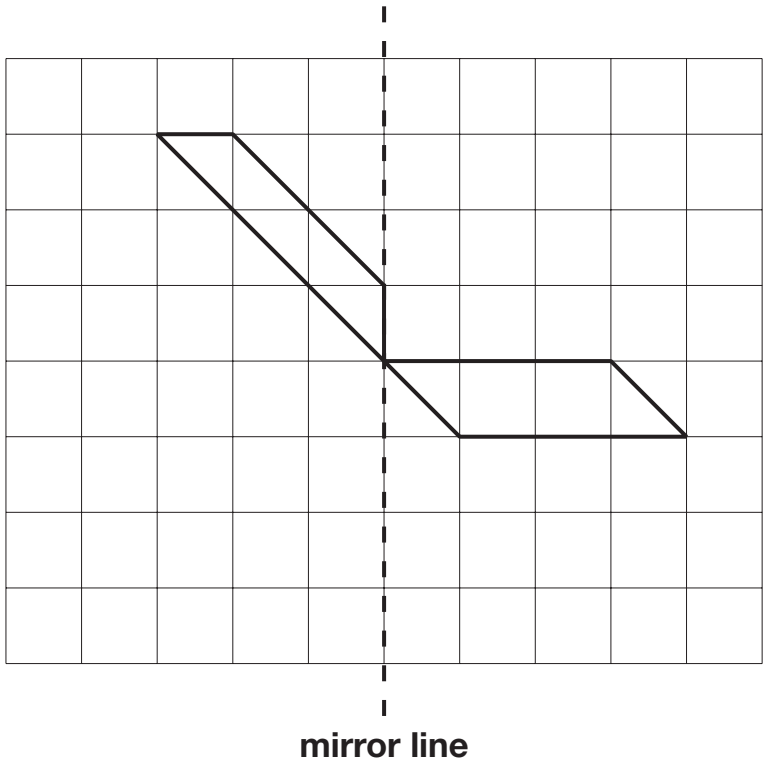
am 8c

1 mark

9 Here is a design on a square grid.

Complete the design so that it is symmetrical about the mirror line.

Use a ruler.



9

1 mark

Total out of 4 _____

10

Seb goes on a sponsored walk to collect money for charity.

His aunt promises to pay 75p for each kilometre he walks.

She pays him £6.75 at the end of the walk.

How many kilometres does Seb walk?

km

10a

1 mark

15% of the people walk 5 km or less.

40% of the people walk 8 km or more.

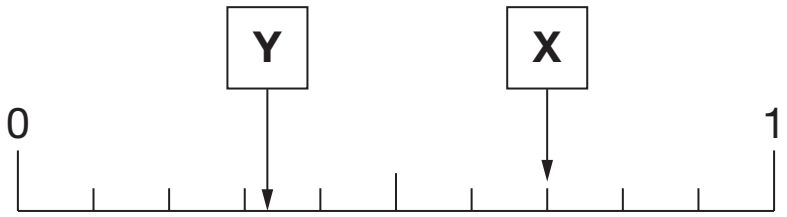
What percentage of the people walk between 5 km and 8 km?

%

10b

1 mark

11 Here is a number line.



What is the value of **X**?

X = ☐

11a

1 mark

Estimate the value of **Y**.

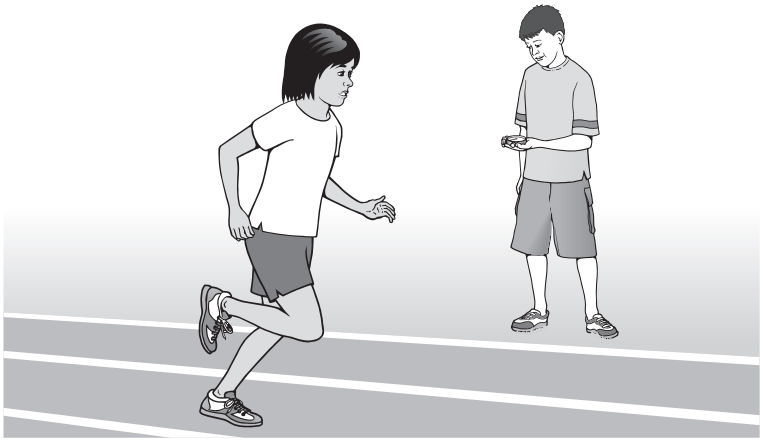
Y = ☐

11b

1 mark

Total out of 4 ____

12



Kirsty ran a race in one and a half minutes.

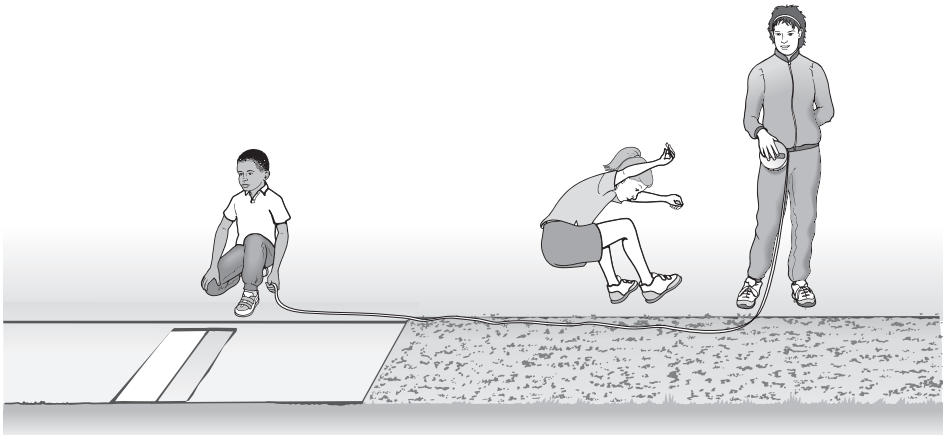
Mina took 10 seconds longer.

How many **seconds** did Mina take to run the race?

seconds

12a

1 mark



Seb made a jump of two and a half metres.

Kirsty's jump was 10 centimetres longer.

How long was Kirsty's jump?

12b

1 mark

13 Three single-digit numbers multiply to make 504

Write the missing numbers.

$\square \times \square \times \square = 504$

13

1 mark

14 Mina thinks of a 3-D shape.

She says,

'It has 5 faces.
Two opposite faces are triangles.
The other faces are rectangles.'

What is the name of the 3-D shape?

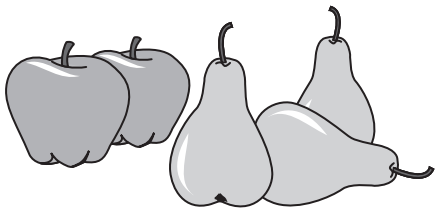
14

1 mark

Total out of 4 _____

15 Seb bought 2 apples and 3 pears.

He spent £1.59 altogether.



Apples cost 24p each.

How much does **one** pear cost?

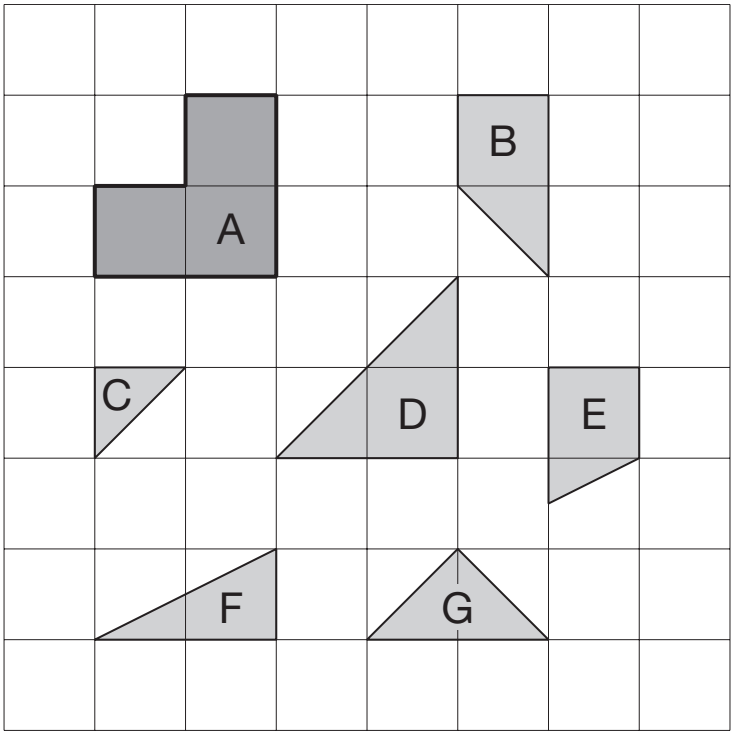
Show your method

15i

15ii

2 marks

16 Here are some tiles on a square grid.



Three different tiles can be fitted together without overlapping to make a shape identical to tile **A**.

Write the letters of the three tiles.

_____ and _____ and _____ 16

1 mark

Total out of 3 _____

17 A gardener plants tulip bulbs in a flower bed.

She plants 3 red bulbs for every 4 white bulbs.

She plants 60 red bulbs.

How many **white** bulbs does she plant?

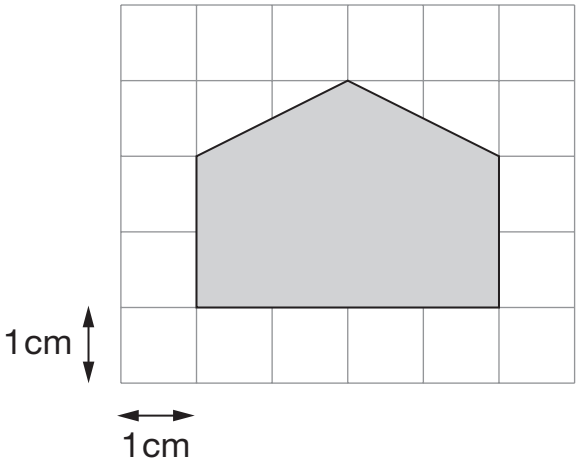
Show your method

17i

17ii

2 marks

18 Here is a shaded shape on a 1cm square grid.



What is the **area** of the shaded shape?

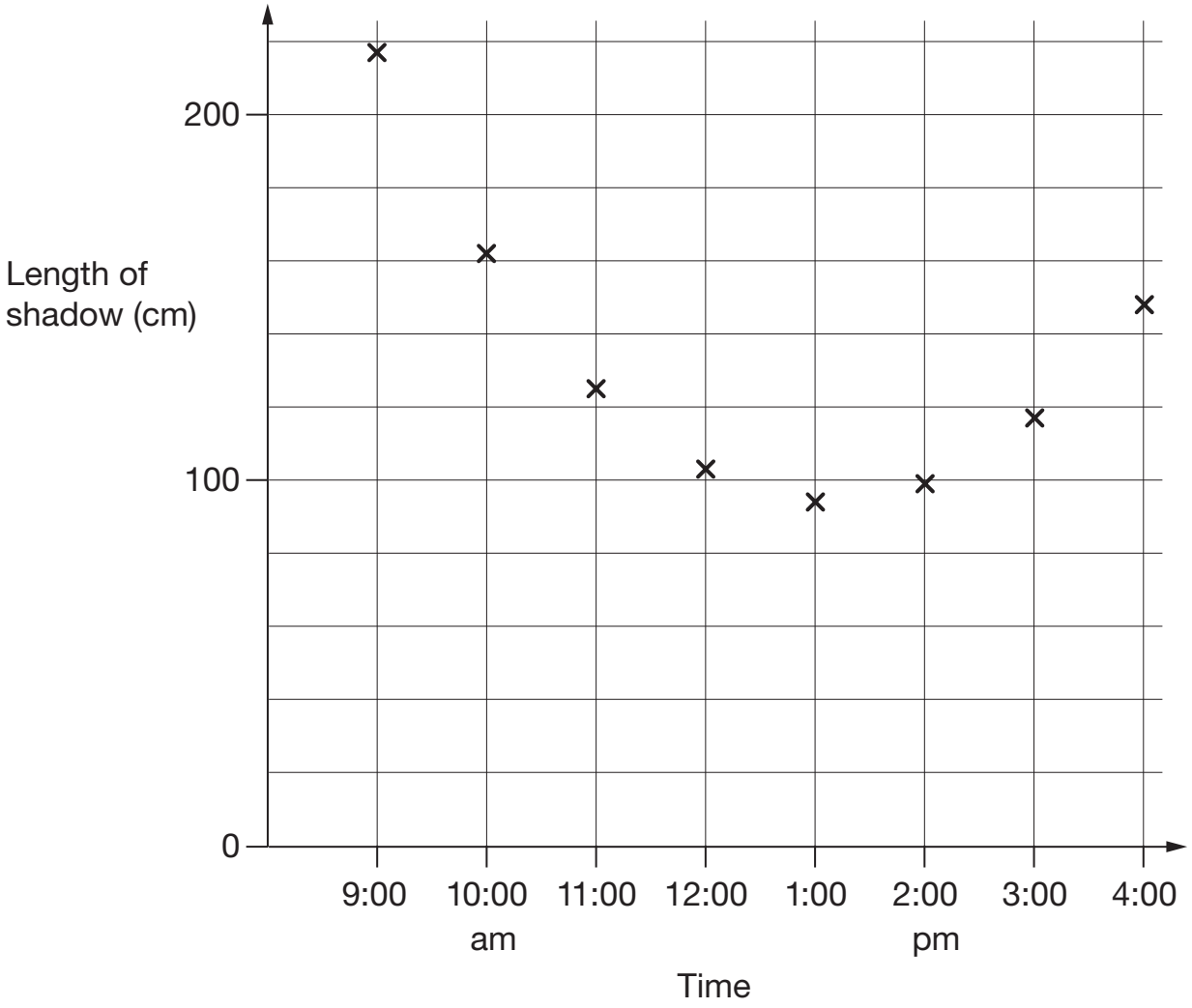
cm^2

18

1 mark

19 Kirsty measured the length of her shadow every hour on one sunny day.

She plotted her results on this graph.



Look at the graph.

Estimate the length of Kirsty's shadow at 3:30 pm.

cm

19a

1 mark

Estimate a time when her shadow was 180 centimetres long.

:

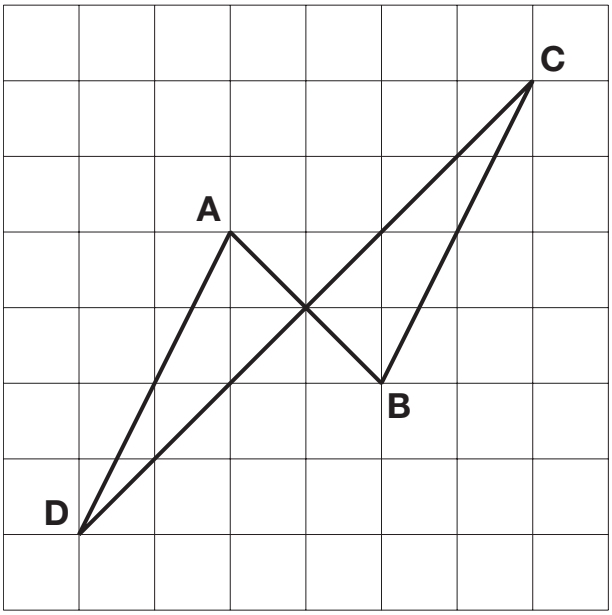
19b

1 mark

Total out of 5

20 The diagram shows four lines drawn on a square grid.

The lines are **AB**, **BC**, **CD** and **DA**.



Which two of the lines are **parallel**?
Circle them in the list below.

AB BC CD DA

20a

1 mark

Which two of the lines are **perpendicular**?
Circle them in the list below.

AB BC CD DA

20b

1 mark

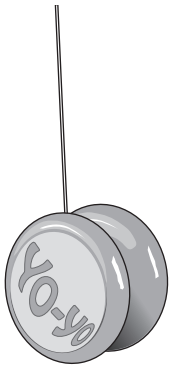
21 Write the missing number to make this calculation correct.

$$(18 + \square) \times 32 = 777.6$$

21

1 mark

22 A school buys some yo-yos as prizes.



The yo-yos cost £4.25 each.

The school has **£40** to spend on prizes.

They buy as many yo-yos as they can.

How much money is left?

Show your method

22i

22ii

2 marks

Total out of 5

23 j and k stand for two numbers.

Double j equals half of k.

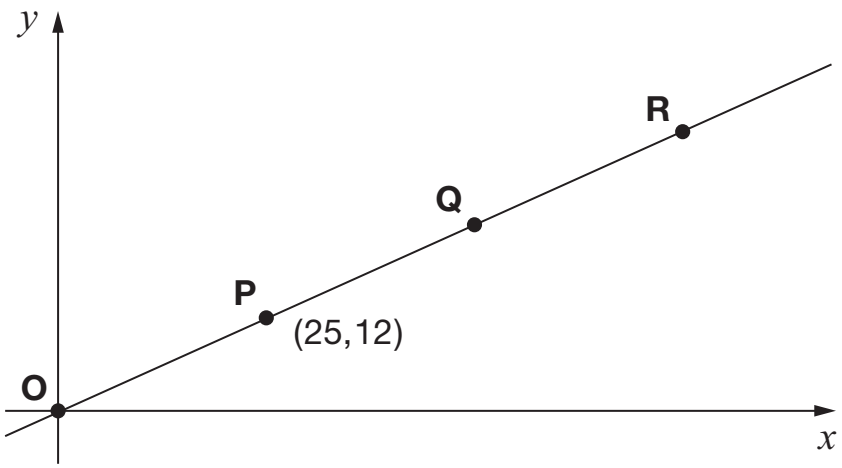
Write numbers to complete the sentence below.

When j is ☐ then k is ☐

23

1 mark

24 Here is a line on coordinate axes.



Points **O**, **P**, **Q** and **R** are equally spaced.

The coordinates of **P** are (25,12).

What are the coordinates of **R**?

R = (,)

24

1 mark

25 Three whole numbers add up to 50

Seb says,

'All three numbers must be even numbers.'

Is Seb correct?
Circle **Yes** or **No**.

Yes / No

Explain how you know.

25

1 mark

Total out of 3 _____

STA/12/5589 (Pupil pack)
STA/12/5581 (Mark schemes pack)