

MATHEMATICS

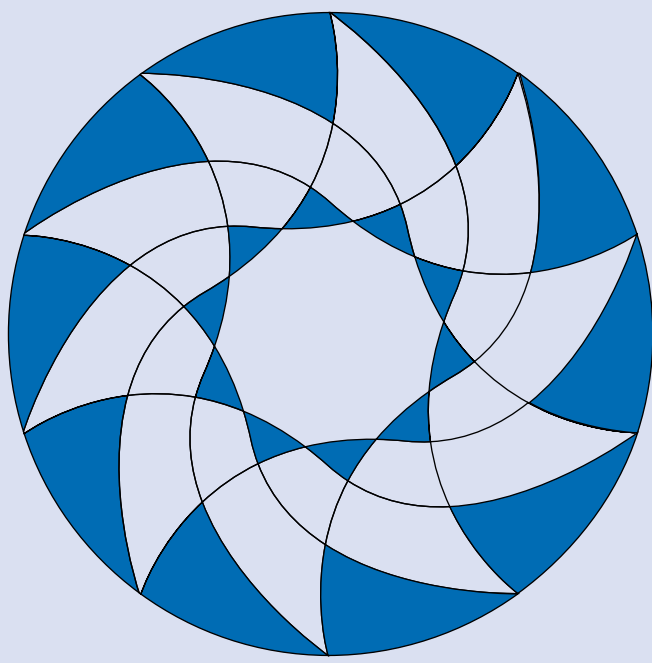
KEY STAGE 2 2001

TEST B **LEVELS 3-5**

CALCULATOR ALLOWED

PAGE	MARKS
3	
5	
7	
9	
11	
13	
15	
17	
TOTAL	

BORDERLINE CHECK	
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First Name

Last Name

School

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**.

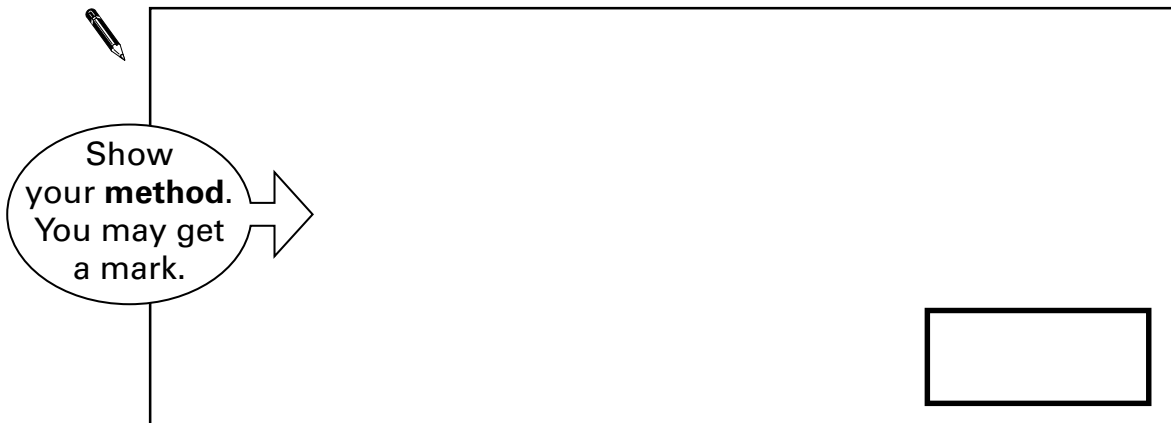
Follow the instructions for each question carefully.



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.

1Circle **three** numbers which **add** to make **190**

10

30

50

70

90



1

1 mark

2Write in the **missing** number.

8

×

=

400

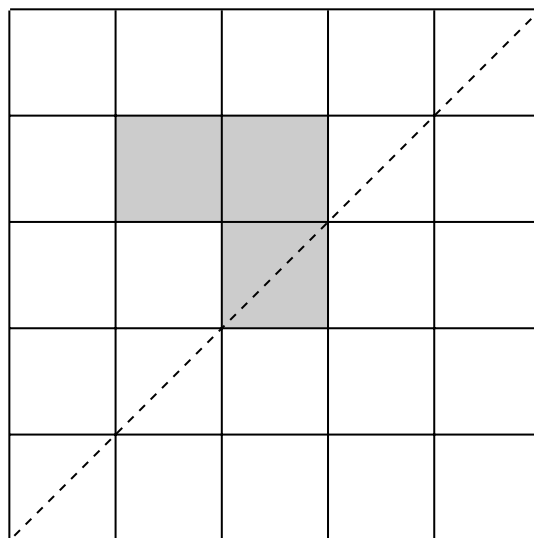


2

1 mark

3Shade in **two more squares** to make this design symmetrical about the mirror line.

You may use a mirror or tracing paper.



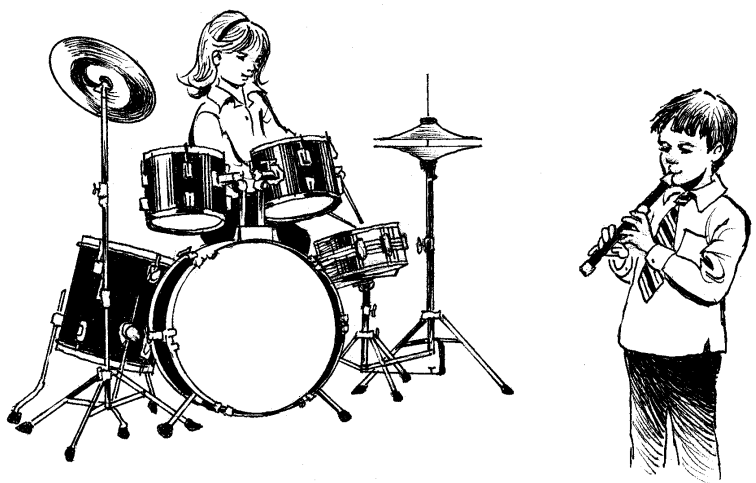
mirror line



3

1 mark

4



This chart shows the musical instruments some children play.

	Lena	John	Rashid	Nicola	Yin
drums	✓	✓		✓	
keyboard			✓		
trumpet	✓				✓
recorder			✓	✓	✓
piano	✓	✓	✓		

Who plays **both recorder and drums**?

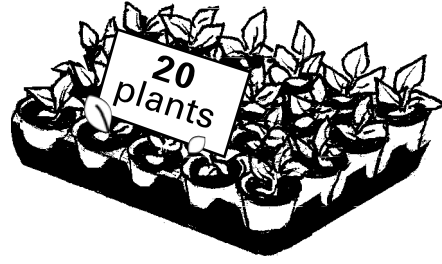


4a
1 mark

How many children play **more than two** musical instruments?



4b
1 mark

5Plants are sold in trays of **20**Ivana buys **7 trays** of plants.

How many plants is this?



5a

1 mark

David wants **240 plants**.

How many trays does he need to buy?

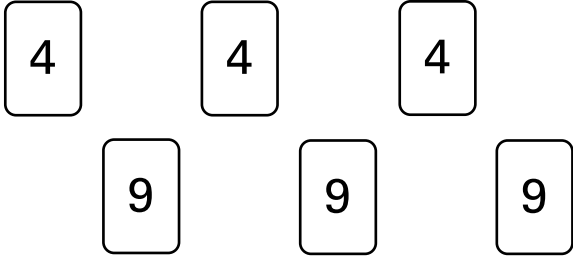


5b


1 mark

6

Here are some number cards.



Use five of the number cards to make this correct.




+		
5 4 8		

6
2 marks

7

Write in what the missing numbers could be.

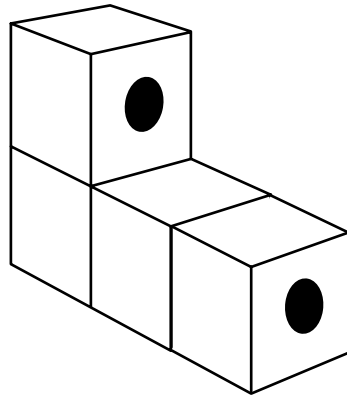
 $(\square \div \square) + 90 = 100$

7
1 mark

8

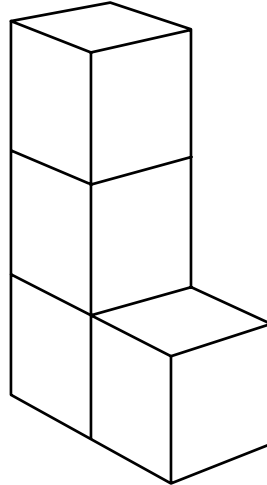
Tom makes this shape from four cubes stuck together.

Two circles are drawn on the shape.



Tom moves the shape.

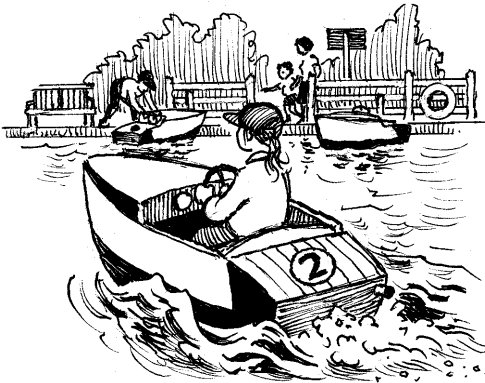
Draw the **circles** on the shape in its new position.



8

1 mark

9



Boat Hire	
<p>Motor boats £1.50 for 15 minutes</p>	<p>Rowing boats £2.50 for 1 hour</p>

How much does it cost to hire a **rowing boat** for three hours?



9a
1 mark

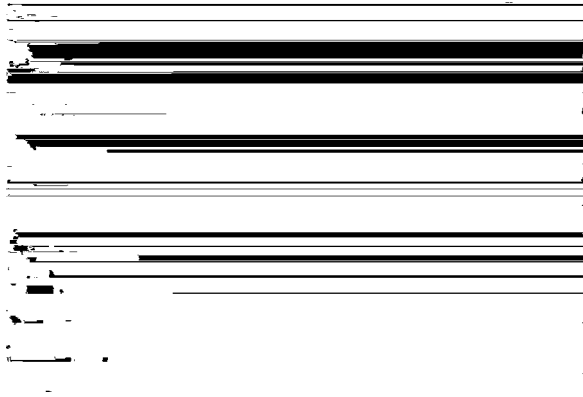
Sasha pays **£3.00** to hire a **motor boat**.
She goes out at **3:20 pm**.

By what time must she **return**?



9b
1 mark

10




This is the cost to visit the waxworks.

Adults	£ 8.50
Children	£ 4.50

On Friday morning **12 adults** and **20 children** visit the waxworks.

How much do they pay altogether?



Show your **method**.
You may get a mark.


£

10a
2 marks

Guide books cost **£1.50** each.

The waxworks sells **£24** worth of **guide books**.

How many guide books is this?



10b
1 mark

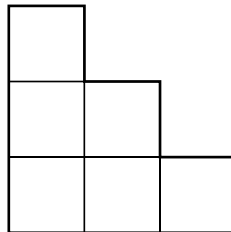
11Circle **two numbers** which have a **difference of 2**

-1 -0.5 0 0.5 1 1.5



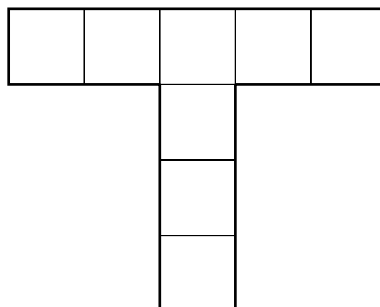
11

1 mark

12Shade **one third** of this shape.

12a

1 mark

Shade **one quarter** of this shape.

12b

1 mark

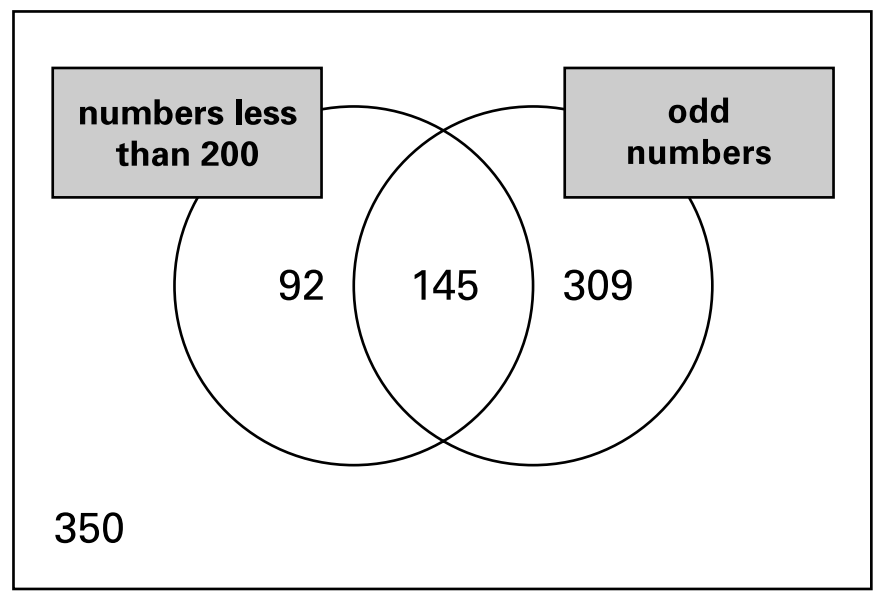


13

Write these numbers in the correct places on the Venn diagram.

Some numbers are already placed.

99 170 221



13
2 marks

14

Match each box to the correct number.

One has been done for you.



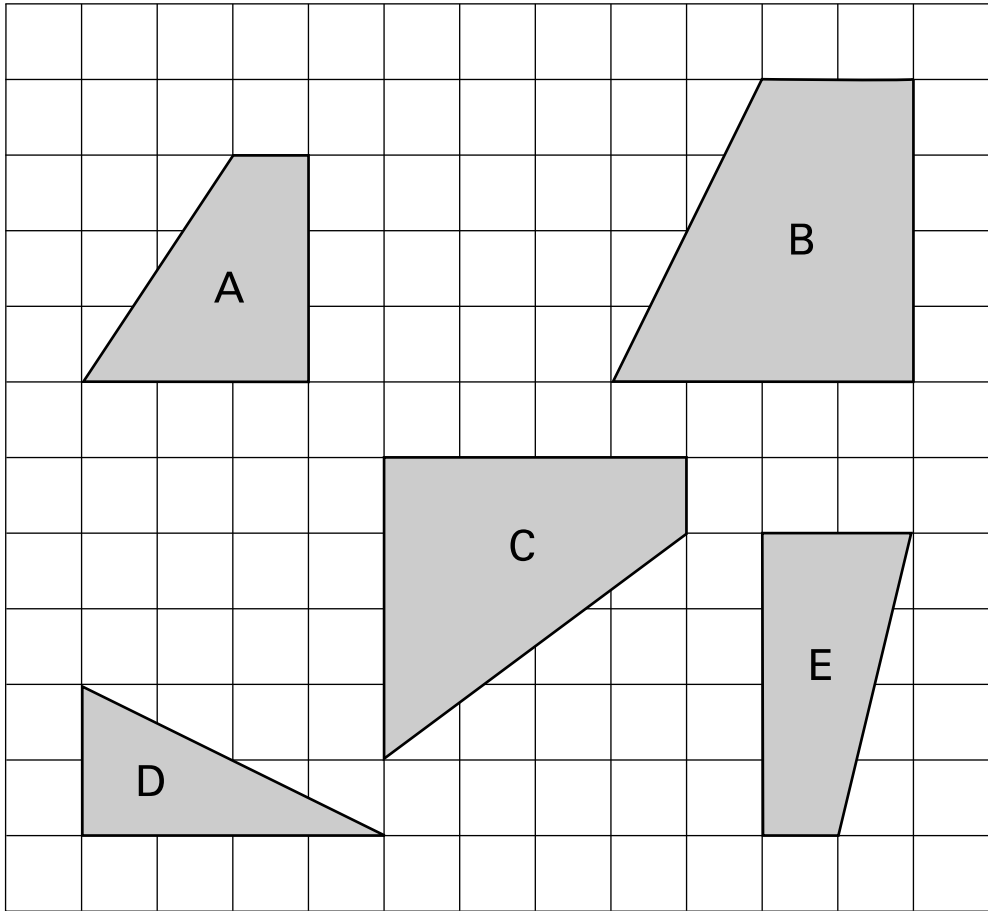
	45
	40
$\frac{1}{2}$ of 30	35
$\frac{1}{3}$ of 75	30
$\frac{1}{5}$ of 150	25
	20
	15

(Note: A line connects the box for $\frac{1}{2}$ of 30 to the number 15.)


14
1 mark

15

Here are five shapes on a square grid.



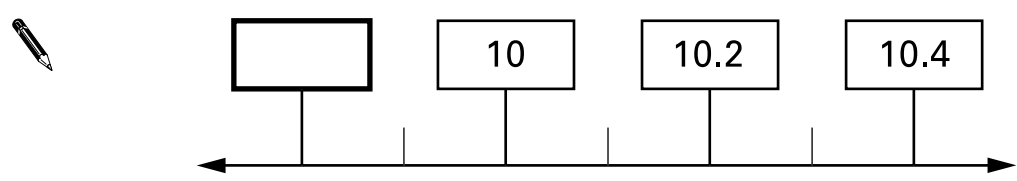
Which **two** shapes fit together to make a **square**?

 and

1 mark

16

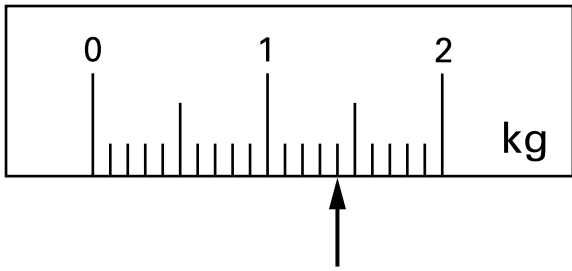
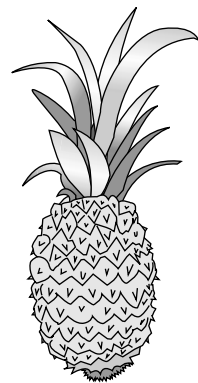
Write in the **missing** number on this number line.



1 mark

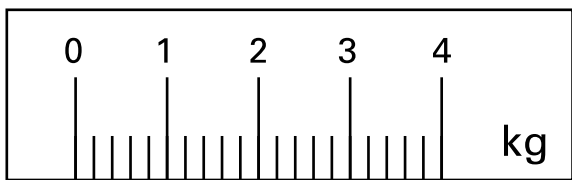
17

On this scale, the arrow (↑) shows the weight of this pineapple.



Here is a **different** scale.

Mark with an arrow (↑) the weight of the **same** pineapple.

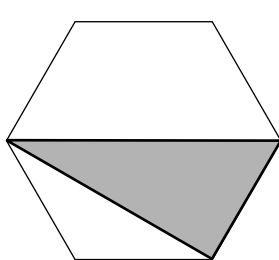
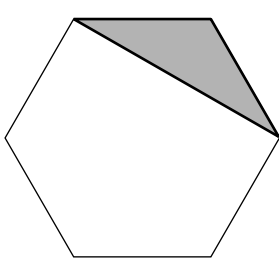


17
1 mark

18

These two shaded triangles are each inside a regular hexagon.

Under each hexagon, put a ring around the correct name of the shaded triangle.



- equilateral
- isosceles
- scalene

- equilateral
- isosceles
- scalene

18
1 mark

19

Here is a recipe for raspberry ice cream.

raspberry ice cream for 8 people
$\frac{1}{2}$ litre of cream 1kg raspberries 250g sugar



This recipe is for **8 people**.

Josie makes enough raspberry ice cream for **12 people**.

How much **cream** does she use?

✎

litre

19a
1 mark

Fred makes raspberry ice cream in the same way.

He uses $2\frac{1}{2}$ kg of raspberries.

How much **sugar** does he use?

✎

Show your **method**.
 You may get a mark.

g

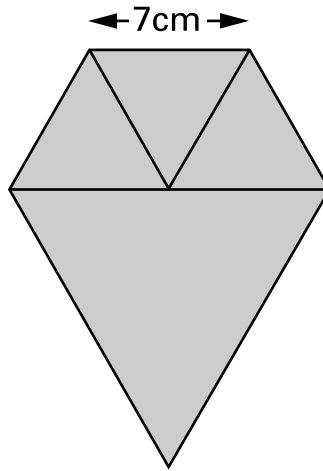
19b
2 marks

20

Lauren has **three small equilateral triangles** and **one large equilateral triangle**.

The small triangles have sides of **7 centimetres**.

Lauren makes this shape.



Not actual size

Calculate the **perimeter** of the shape.

Do **not** use a ruler.


 cm

20

1 mark

21

Write in the missing number.



$$404.09 \div \boxed{} = 8.5$$

21

1 mark

22

The rule for this sequence of numbers is 'add 3 each time'.

1 4 7 1 01 31 ...6

The sequence continues in the same way.


Mary says,

'No matter how far you go there will never be a multiple of 3 in the sequence'.

Is she correct?
Circle Yes or No.

 Yes / No

Explain how you know.


.....
.....

22
1 mark

23

Write the **three prime numbers** which multiply to make **231**

 × × = 231

23
1 mark

24

Calculate $\frac{5}{12}$ of 378

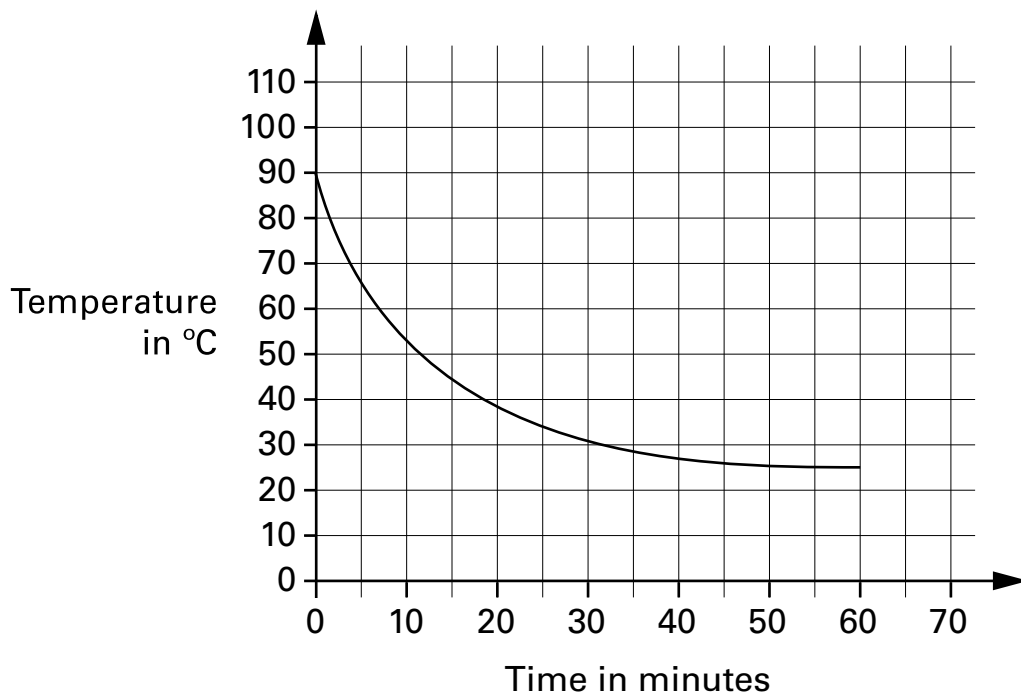
24

1 mark

25

A hot liquid is left to cool in a science experiment.

This graph shows how the temperature of the liquid changes as it cools.

Read from the graph **how many minutes** it takes for the temperature to reach **40°C**

25a

1 mark

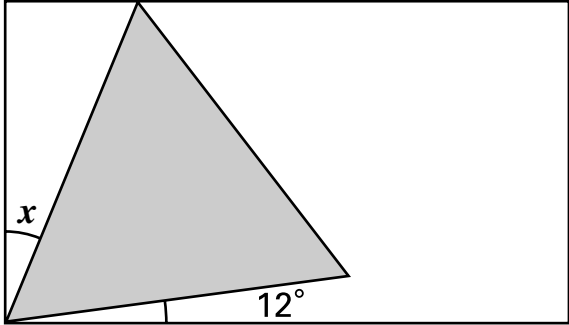
Read from the graph **how many minutes** the temperature is **above 60°C**

25b

1 mark

26

Here is an **equilateral triangle** inside a **rectangle**.



Not to scale

Calculate the value of angle x .

Do **not** use a protractor (angle measurer).



Show your **method**.
You may get a mark.

26
2 marks

27

p and q each stand for whole numbers.

$$p + q = 1000$$

p is 150 **greater** than q .

Calculate the numbers p and q .



Show your **method**.
You may get a mark.

$p =$

$q =$

27
2 marks

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