

Ma

KEY STAGE

2

LEVELS

3-5

2010

# Mathematics test

## Test B

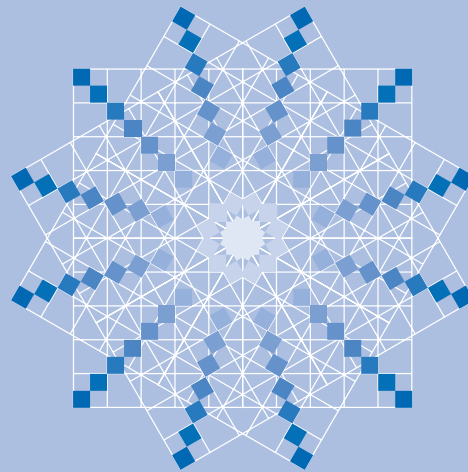
Calculator allowed

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

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

School \_\_\_\_\_

DCSF no. \_\_\_\_\_



For marker's use only

Page	Marks
5	
7	
9	
11	
13	
15	
17	
19	
21	
23	
<b>TOTAL</b>	

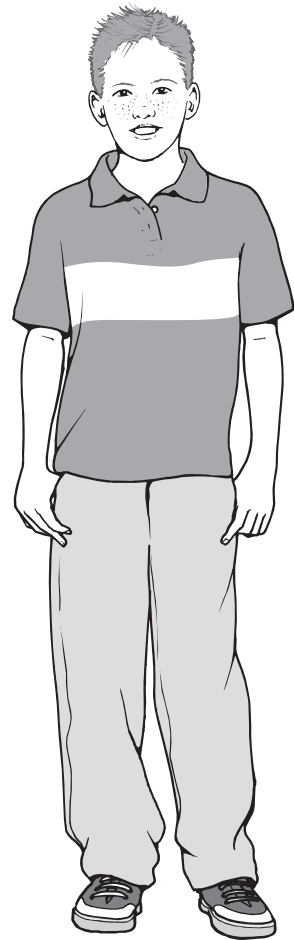
These three children appear in some of the questions in this test.



Sarah



Amy



Liam

# 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:**

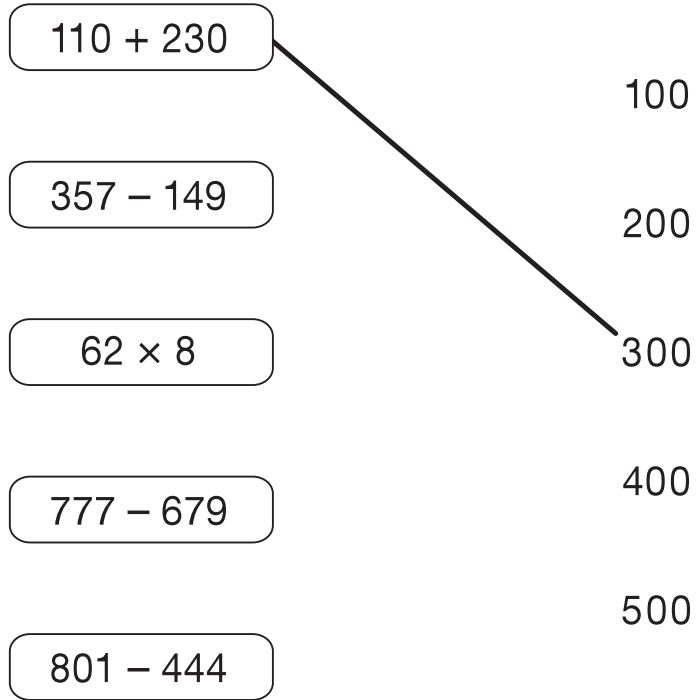


For these questions you may get a mark for showing your method.

1

Join each of these calculations to the number that is **nearest** to the correct answer.

One has been done for you.

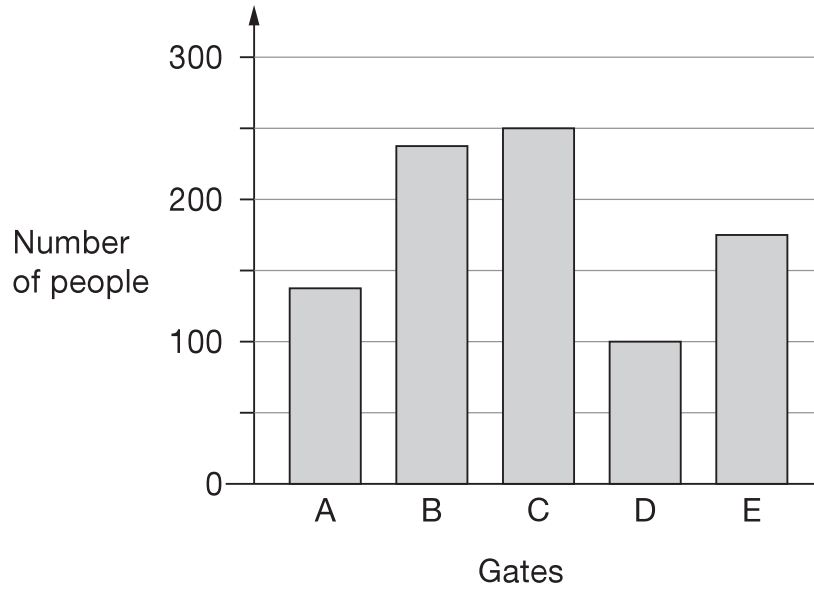


1i  
\_\_\_\_\_  
1ii  
\_\_\_\_\_  
2 marks

2

There are five entry gates at an open air concert.

This bar chart shows how many people went through each gate.



How many **more** people went through gate C than gate D?



2a

1 mark

How many gates had **fewer than 150** people go through?



2b

1 mark

3

What's my number?

?	?	?
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It is a three-digit number.

All the digits are odd.

The digits add up to 7

What could my number be?



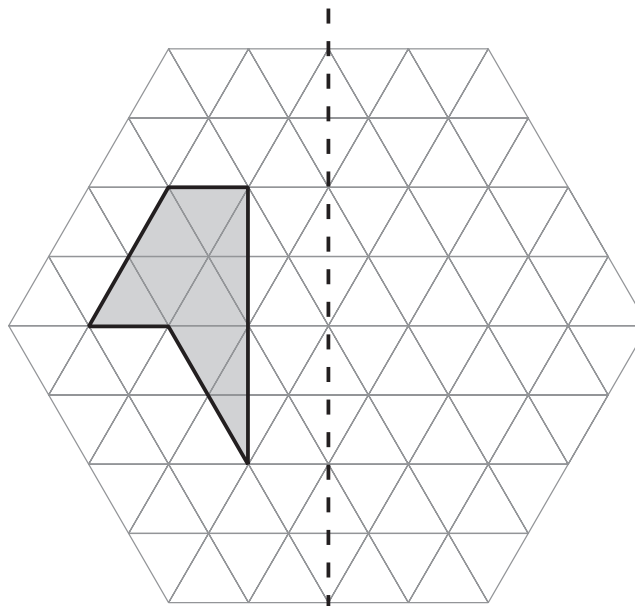
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3

1 mark

4

Draw the reflection of the shaded shape in the mirror line.



mirror line

4

1 mark

5

This table shows the opening times of a pet clinic.

  <b>Pet Clinic</b>  	
Monday	10am to 4:30pm
Tuesday	10am to 4:30pm
Wednesday	Closed all day
Thursday	10:30am to 2:30pm
Friday	1pm to 6:30pm
Saturday	10am to 5:30pm
Sunday	Closed all day

How many hours is the clinic open on Thursday?



5a

1 mark

On which day is the clinic open for the longest time?



5b

1 mark

Liam takes his dog to the clinic on Saturday.

He arrives at 9:25 am.

How many minutes is it before the clinic opens?

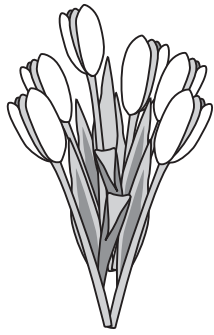


5c

1 mark

6

These are some prices in a flower shop.



tulips  
£1.20 for a bunch



roses  
40p each



daffodils  
55p for a bunch

How many roses can you buy for exactly £2?



6a

1 mark

Amy buys **one** bunch of tulips and **three** bunches of daffodils.

How much does she pay **altogether**?



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

6bi

6bii

2 marks



7

Sarah has a packet of balloons.

The contents of the packet are

5 red balloons

5 blue balloons

10 yellow balloons

Sarah says,



***'One-quarter of the balloons are red'.***

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

 Yes / No

Explain how you know.

A large, hand-drawn cloud-shaped area with a scalloped border, intended for the student to write their explanation. The cloud is empty and occupies most of the lower half of the page.

7

1 mark

8

Here are six digit cards.

2

3

4

5

6

7

Use **all six** digit cards to make three multiples of 3



multiple of 3

multiple of 3

multiple of 3

8

1 mark

9

This table shows the four most popular names for baby girls born each year from 2004 to 2008.

	2004	2005	2006	2007	2008
1st	Emily	Jessica	Olivia	Grace	Olivia
2nd	Ellie	Emily	Grace	Ruby	Ruby
3rd	Jessica	Sophie	Jessica	Olivia	Grace
4th	Sophie	Olivia	Ruby	Emily	Emily

In how many years was Olivia in the **top three** most popular names?



9a

1 mark

Write **all** the years when Emily was a more popular name than Jessica.



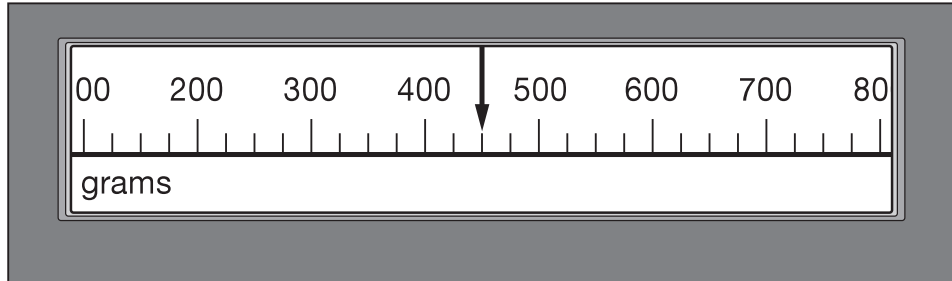
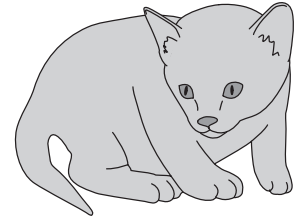
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9b

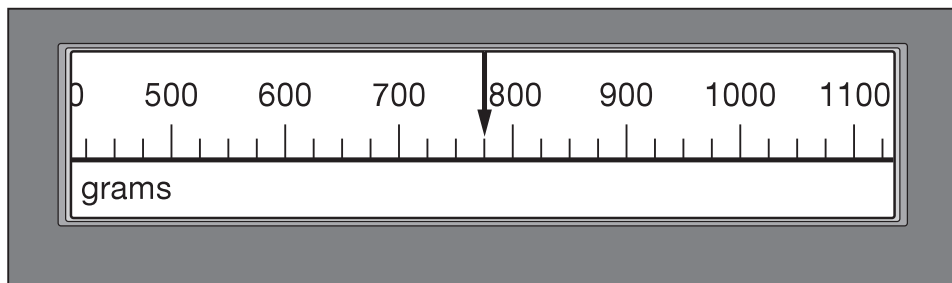
1 mark

10

This scale shows the mass of Amy's kitten when it was one month old.



This scale shows the mass of the kitten when it was two months old.



What is the increase in mass?



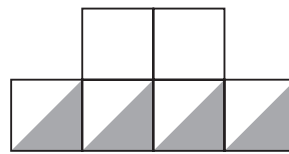
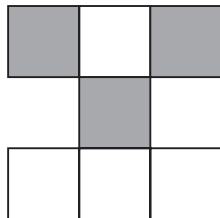
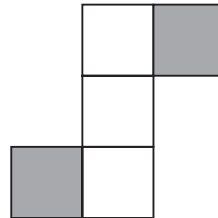
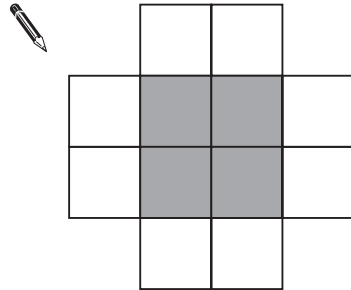
10  
1 mark

11

These diagrams are all made of squares.

Look at each diagram.

Put a tick (✓) if exactly  $\frac{1}{3}$  of it is shaded. Put a cross (✗) if it is not.



11i

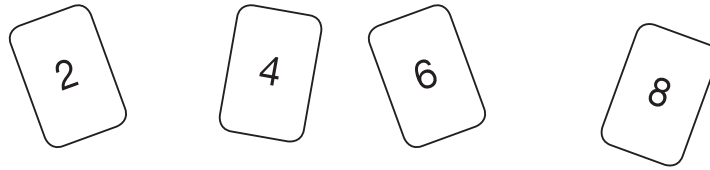
\_\_\_\_\_

11ii


\_\_\_\_\_

2 marks

12



Use all four digit cards to make this number sentence correct.

   ×   > 5000

12  
1 mark

13

Liam thinks of a number.

He divides it by 9 and then adds 25 to the result.

His answer is 36



What number did Liam start with?

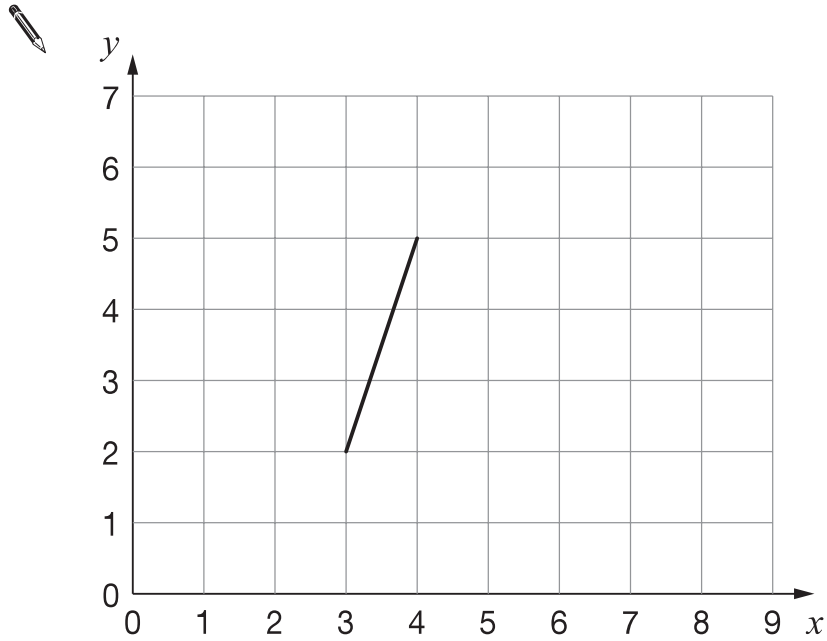


Show your **method**.  
You may get a mark.

13i  
13ii  
2 marks

14

Here is one side of a square drawn on a coordinate grid.



The square has a vertex at (6, 1).

Draw the other three sides of the square on the grid.

Use a ruler.

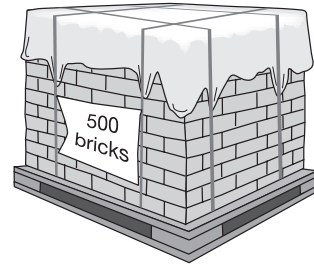
14

1 mark

15

A builder needs 7600 bricks to build a wall.

There are 500 bricks in a load.



How many loads must the builder buy?



15a

1 mark

The price of one load of 500 bricks is £230

What is the cost in pence of one brick?



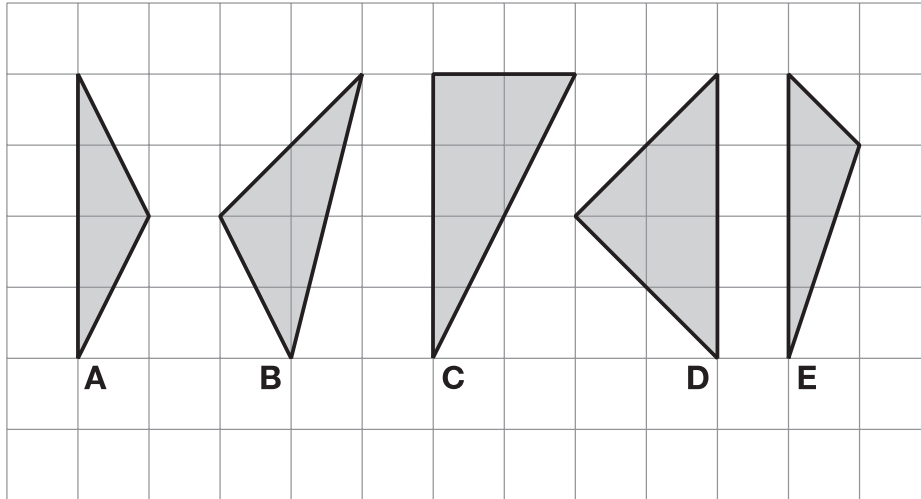
15b

1 mark



16

Here are five shaded triangles on a square grid.



Write the letter of each triangle that has a **right angle**.



\_\_\_\_\_

16a

1 mark

Write the letter of each triangle that has **two equal sides**.



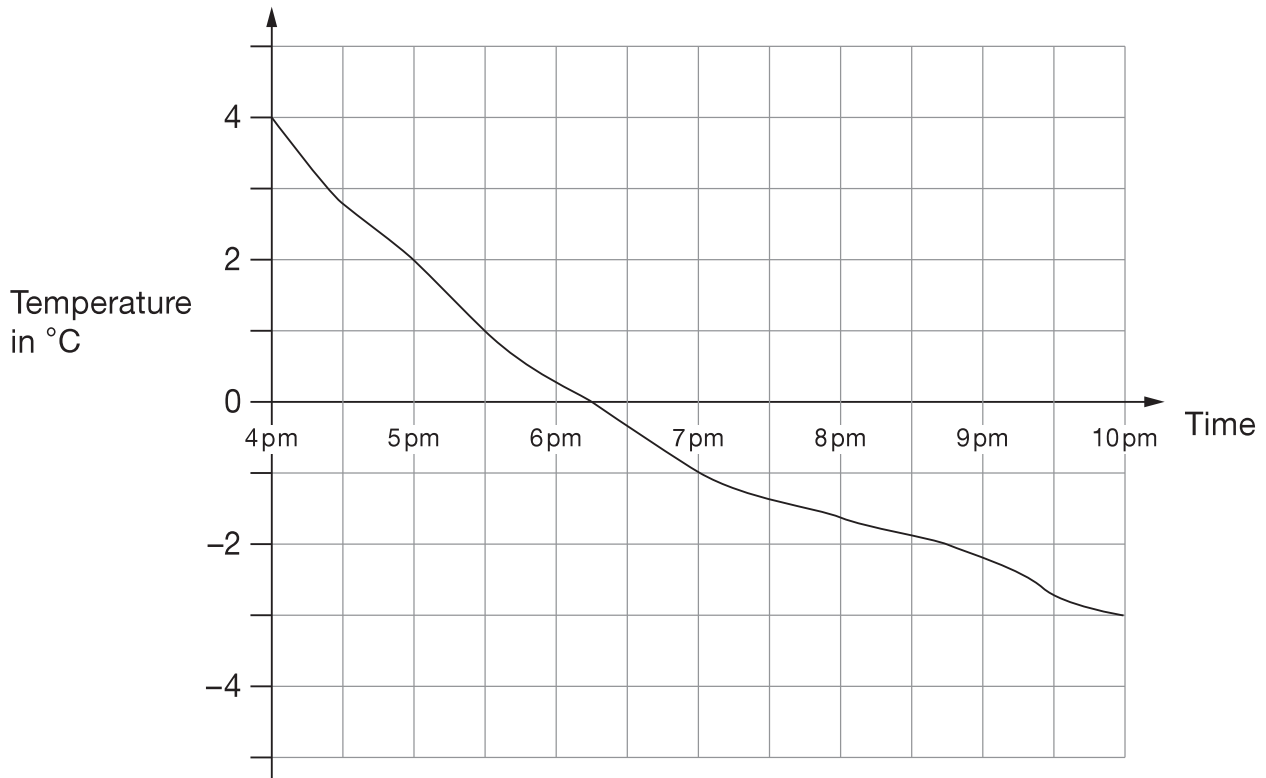
\_\_\_\_\_

16b

1 mark

17

This graph shows the outside temperature from 4pm to 10pm on a day in winter.



At what time was the temperature  $-2^{\circ}\text{C}$ ?



17a

1 mark

How many degrees did the temperature drop from 5pm to 7pm?



17b

1 mark

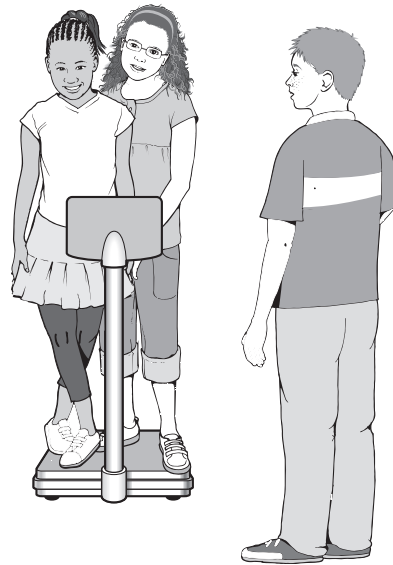
Sarah, Amy and Liam stand on some weighing scales two at a time.

Here are the measurements:

Sarah and Amy **70kg**

Sarah and Liam **80kg**

Liam and Amy **80kg**



How much does Liam weigh?



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

**kg**

18i

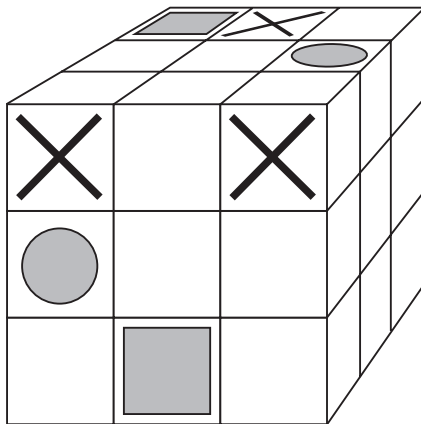
18ii

2 marks

19

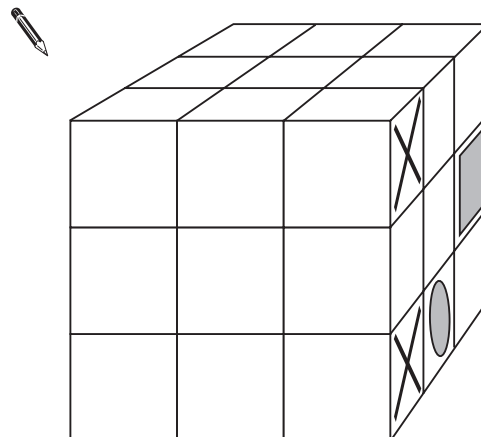
Cubes have been stuck together to make this block.

The block has a pattern on two faces.



The block is turned to the position below.

Draw the missing parts of the pattern on it.



19i

19ii

2 marks

20

Calculate  $\frac{7}{16}$  of 288



20

1 mark

21

Here are four pairs of measurements.

For each pair, put a ring around the **larger** measurement.

One has been done for you.

4 centimetres	4 inches
---------------	----------



10 kilometres	10 miles
---------------	----------

2 litres	2 pints
----------	---------

5 grams	5 pounds
---------	----------

21

1 mark

22

Put a tick (✓) in each row to complete this table.

One has been done for you.



	less than 1000	equal to 1000	more than 1000
$5 \times 15 \times 25$			✓
$16 \times (80.3 - 17.8)$			
$3888 \div (4.32 - 0.57)$			
$(32 - 5.7) \times (32 + 5.7)$			

22i

22ii

2 marks

23

$k$  stands for a number.

Complete the number sentences below.

One has been done for you.

- $5$  more than  $k$  is          $k + 5$
- $2$  less than  $k$  is \_\_\_\_\_
- $3$  more than twice  $k$  is \_\_\_\_\_
- $6$  more than half of  $k$  is \_\_\_\_\_

23i

23ii

2 marks

24

Here are two bags of marbles, **A** and **B**.

Each bag contains blue marbles and red marbles only.



3 blue marbles  
and  
3 red marbles



6 blue marbles  
and  
9 red marbles

Liam chooses a marble from each bag without looking.

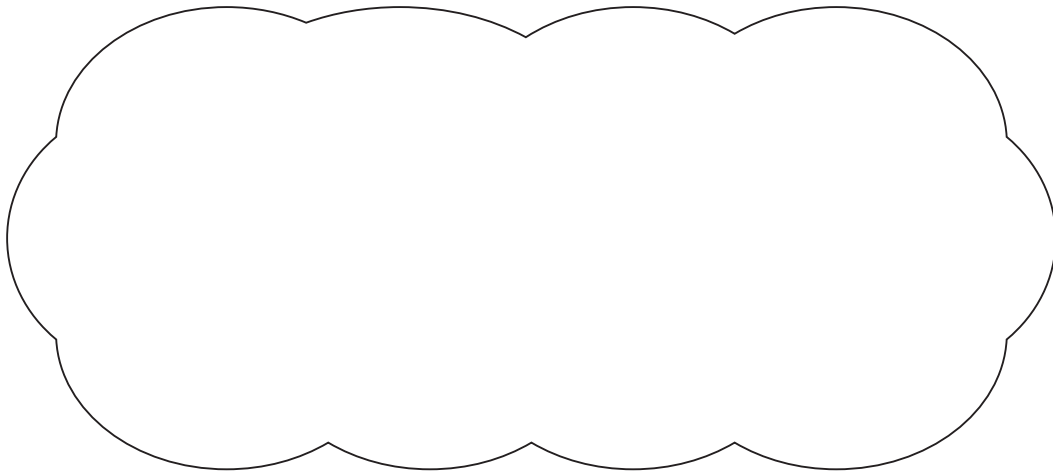
From which bag is he more likely to choose a **blue** marble?

Circle **A** or **B**.



A / B

Explain how you know.

A large, empty, cloud-shaped area with a scalloped border, intended for the student to write their explanation.

24

1 mark

