

Ma

YEAR  
7

LEVELS  
3–4

# Mathematics test

## Paper 2

### Calculator allowed

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

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

School \_\_\_\_\_

#### Remember

- The test is 45 minutes long.
- You **may** use a calculator for any question in this test.
- You will need: pen, pencil, rubber, ruler, angle measurer or protractor and a calculator.
- This test starts with easier questions.
- Try to answer all the questions.
- Write all your answers and working on the test paper – do not use any rough paper. Marks may be awarded for working.
- Check your work carefully.
- Ask your teacher if you are not sure what to do.

For marker's use only

TOTAL MARKS	
Borderline check	

2007

## Instructions

### Answers



This means write down your answer or show your working and write down your answer.

### Calculators



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

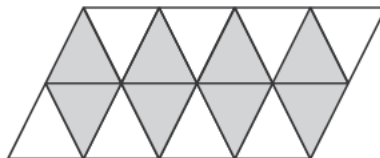
1 Which of these coins make **exactly** £1.10?

Tick (✓) them.



1 mark

2 Look at the shape.



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



1 mark



3

The table shows how many people visit a museum in five weeks.

Week	Number of visitors	Rounded to the nearest hundred
1	453	500
2	328	
3	557	
4	299	
5	356	

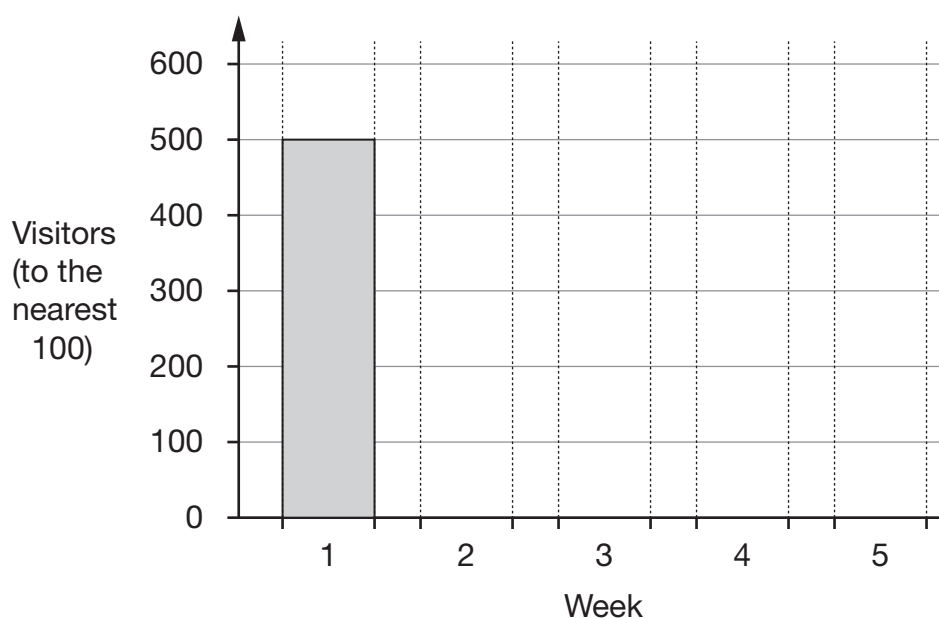
1 mark

(a) Complete the table above by rounding each number to the **nearest hundred**.

The first one is done for you.

(b) Now use the **rounded values** to complete the bar chart below.

The first bar is done for you.



2 marks

4

Tick (✓) the best estimate for each of the following.

(a) The height of a door.



2 millimetres

2 centimetres

2 metres

2 kilometres

1 mark

(b) The length of a pen.



14 millimetres

14 centimetres

14 metres

14 kilometres

1 mark

(c) The distance between Leeds and Manchester.



64 millimetres

64 centimetres

64 metres

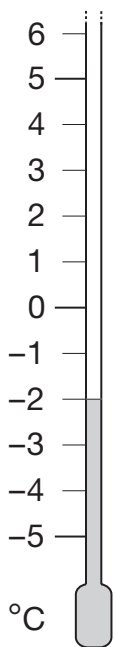
64 kilometres

1 mark

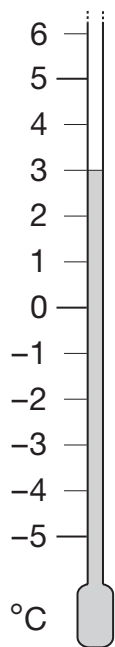


5

The thermometers show the temperature at different times on one day.



6am



1pm

(a) Write the missing number below.

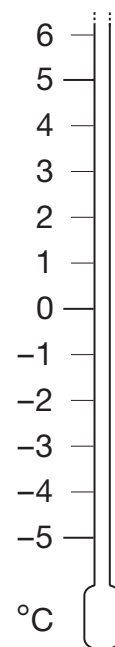


From **6am** to **1pm** the temperature went up by \_\_\_\_\_ °C

\_\_\_\_\_ 1 mark

(b) From **1pm** to **6pm** the temperature **went down by 7°C**

Shade the thermometer to show the temperature at 6pm.



6pm

\_\_\_\_\_ 1 mark

6

Here is part of a number grid.

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24

(a) What number is in the square **below** the number **24**?

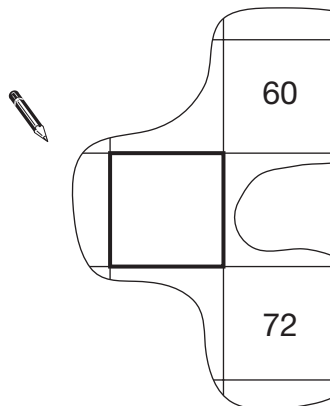


\_\_\_\_\_

1 mark

(b) Here is another part of the **same grid**.

Write in the missing number.



1 mark

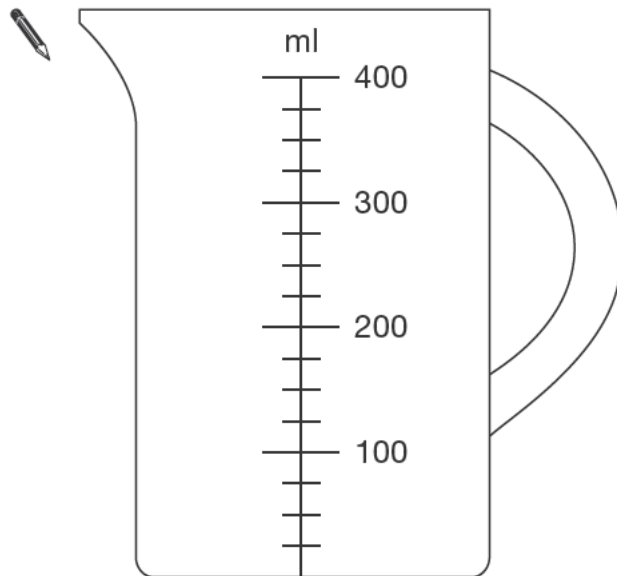


7

Raj is making a cake.

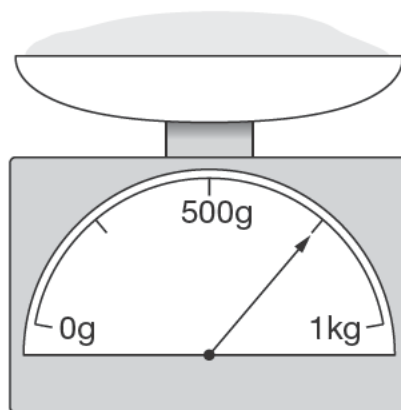
He pours 275ml of milk into a jug.

(a) Draw a line on the jug to show the level of milk.



1 mark

(b) The scales below show how much flour he uses.



How much flour does Raj use?



\_\_\_\_\_ g

1 mark



- (c) Raj put the cake in the oven at 4:00pm.  
He took the cake out of the oven after  $1\frac{1}{2}$  hours.

At what time did he take the cake out of the oven?



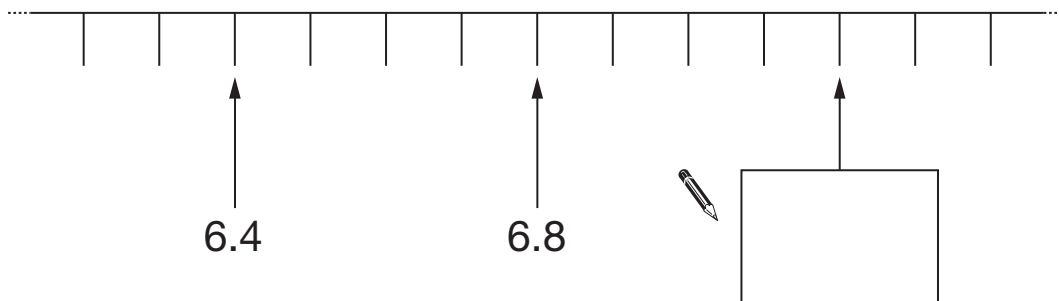
\_\_\_\_\_ pm

1 mark

8


Look at the number line below.



Write the missing number in the box.



9

This question is about the number of bags of sugar you could buy with £10

Key:  = 4 bags

Year	Number of bags
1995	
1999	

(a) In 1995 you could buy 16 bags of sugar.

How many bags of sugar could you buy in **1999**?



\_\_\_\_\_





1 mark

(b) In 2003 you could buy 9 bags of sugar.

**Which drawing** below represents **9 bags** of sugar?


Tick (✓) the correct drawing.



1 mark

10 (a) Write the missing number.




$$\boxed{26} \times \boxed{\phantom{00}} = \boxed{624}$$

1 mark

(b) Now write what the missing numbers below could be.

**Each number must be greater than 10**



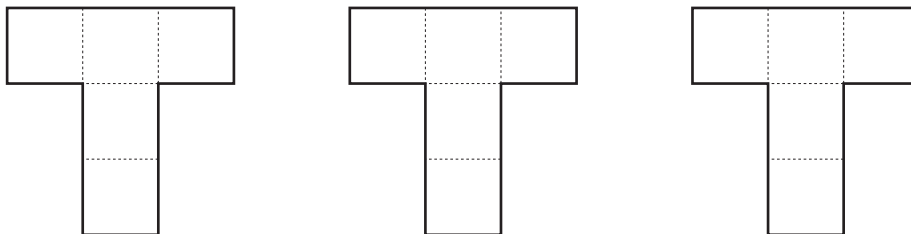
$$\boxed{\phantom{00}} \times \boxed{\phantom{00}} = \boxed{312}$$

1 mark



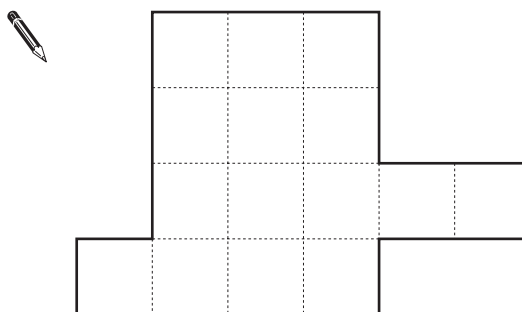
11

Here are three T-shapes drawn on centimetre square grids.



(a) The three T-shapes fit together to make shape A.

Show the three T-shapes on the diagram below.



shape A

1 mark

(b) What is the **total area** of shape A?

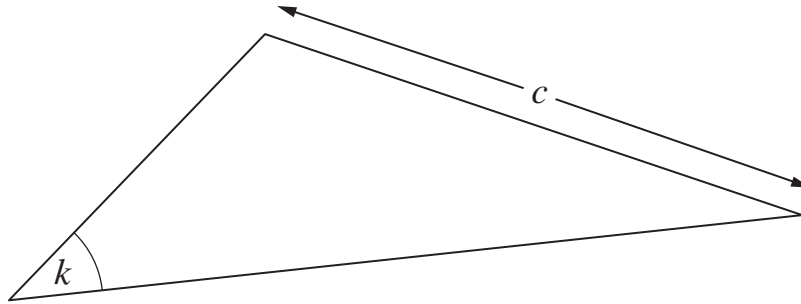


\_\_\_\_\_ cm<sup>2</sup>

1 mark

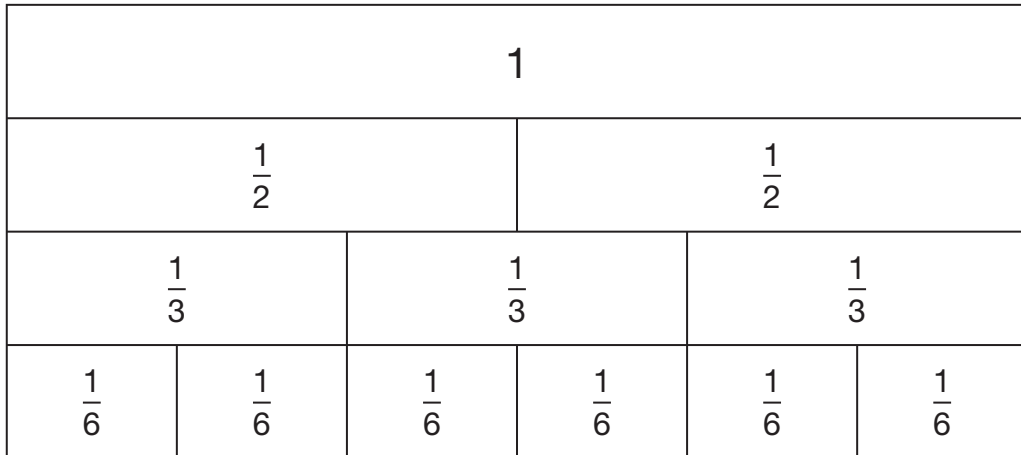
12

Look at the triangle.

(a) Measure accurately length  $c$  $c = \underline{\hspace{2cm}} \text{ cm}$           
1 mark(b) Measure accurately angle  $k$  $k = \underline{\hspace{2cm}}^\circ$           
1 mark

13

Look at the fraction diagram.



Write the missing numbers in the boxes below.



$$\boxed{1} = \frac{\boxed{\phantom{000}}}{\boxed{6}}$$

1 mark

$$\frac{\boxed{1}}{\boxed{2}} = \frac{\boxed{\phantom{000}}}{\boxed{6}}$$

1 mark

$$\frac{\boxed{\phantom{000}}}{\boxed{3}} = \frac{\boxed{4}}{\boxed{6}}$$

1 mark

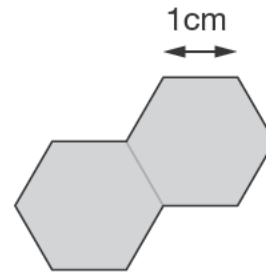
14

All the hexagons in this question are the same size.

Each side of a hexagon is **1cm** long.

(a) I put **two hexagons** together to make this shape.

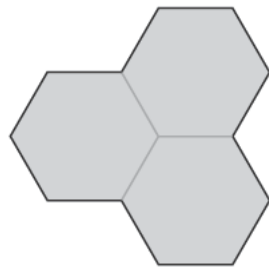
What is the **perimeter** of the shape?



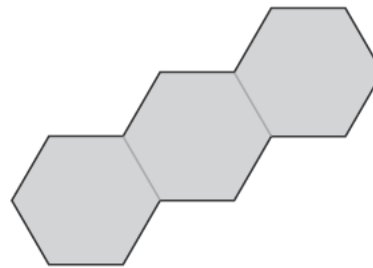
\_\_\_\_\_ cm

1 mark

(b) I put three hexagons together to make different shapes.



Shape **A**



Shape **B**

Which shape has the **smaller** perimeter?

Tick (✓) the correct box.


 A

 B

 Both the same

Explain how you know.



1 mark

15

Starlings are birds that live in groups.

The chart shows the **ages** of a group of starlings.

Female starlings						Age	Male starlings					
						1 year						
						2 years						
						3 years						
						4 years						
						5 years						
						6 years						
						7 years						
						8 years						
						9 years						

In the chart, each square represents **3** starlings.

(a) How many **female** starlings are aged **4 years**?



\_\_\_\_\_ female

\_\_\_\_\_ 1 mark

(b) How many **male** starlings are aged **4 years**?



\_\_\_\_\_ male

\_\_\_\_\_ 1 mark

(c) More male starlings than female starlings are aged **6 years or older**.

How many more?

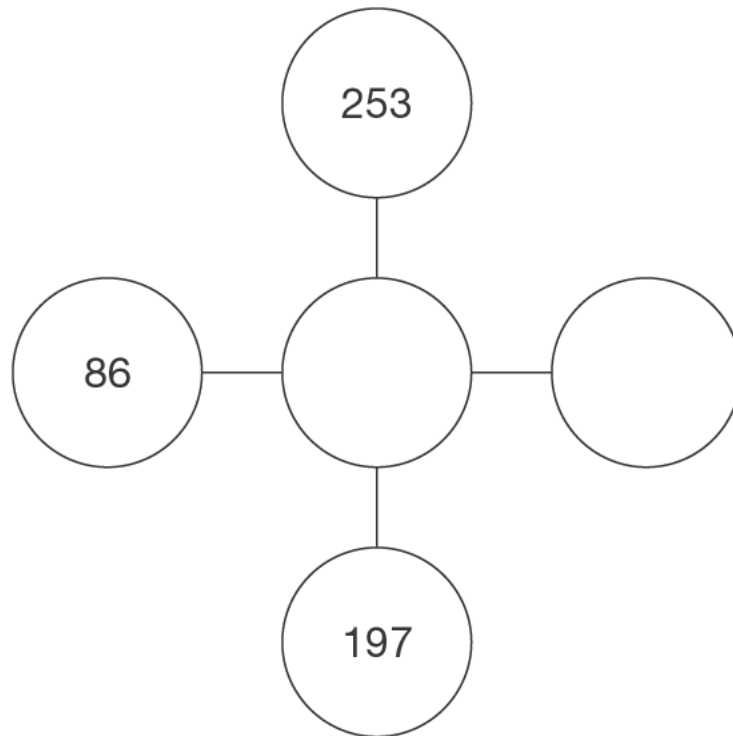


\_\_\_\_\_

\_\_\_\_\_ 1 mark



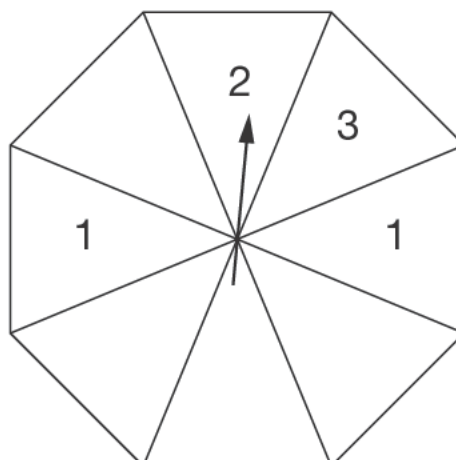
- 16 Write numbers in the circles to make the three numbers along each line add up to 678



\_\_\_\_\_  
2 marks

- 17 The diagram shows a fair spinner divided into 8 equal sections. I am going to spin the pointer.

Write numbers on the blank sections so that there is a **50% chance** that I will spin an **odd number**.



1 mark

18

The diagram shows what Molly buys.



?



£1.99



79p

She pays with a **£5** note and gets **66p change**.

How much did Molly pay for the shampoo?

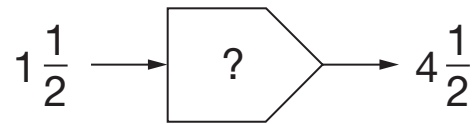


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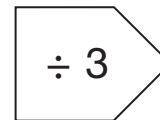
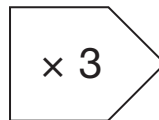
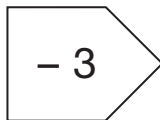
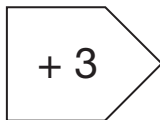
2 marks

- 19 (a) A rule changes  $1\frac{1}{2}$  to  $4\frac{1}{2}$



What could the rule be?

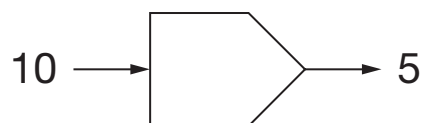
Tick (✓) the **two** correct answers below.



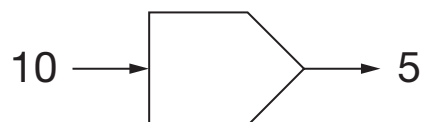
1 mark

- (b) A rule changes 10 to 5

What could the rule be? Give two **different answers**.



1 mark



1 mark



