Reigate Grammar School

11+ Entrance Examination
January 2014

MATHEMATICS

Time allowed: 45 minutes

NAME………………………………………………………………………

- **Work through the paper carefully**
- **You do not have to finish everything**
- **Do not spend too much time on any single question**
- **Show any working in the spaces provided**
- **Use the blank left hand pages for rough work**

PAGE	1	2	3	4	5	6	7	8	TOTAL
MARK	18	22	18	9	14	9	5	5	100
MARK									

ANSWER ALL QUESTIONS IN THE SPACES PROVIDED, SHOWING ANY NECESSARY WORKINGS

			DO NOT WRITE IN THIS BOX
2014 + 998 =	2014 – 998 =	What is 2014 x 40?	1 1 1
Use your previous answer to write down 2014 x 4	Use these last two answers to write down 2014 x 44	Use your previous answer to write down 20.14 x 4.4	1 1 1
20.14 + 0.08 =	20.14 + 0.8 =	20.14 + 8 =	1 1 1
Given that 68 x 41 = 2788 What is 2788 ÷ 68 ? What is 278.8 ÷ 68? What is 0.2788 ÷ 410?	What is 400 x 13 ? What is 400 x 1.3? What is 400 x 0.13?	What is 9000 ÷ 100? What is 9000 ÷ 300? What is 9000 ÷ 600?	1 1 1 1 1 1 1 1 1

			DO NOT WRITE IN THIS BOX
Which of these three is the largest and which is the smallest? 66% 0.607 $\frac{2}{3}$ Largest = Smallest =	What is 10% of £120? What is 5% of £120? What is $2^1/_2$% of £120? Use your answers to find $17^1/_2$% of £120	Find one sixth of 240 Use your answer to find five sixths of 240	1 1 1 1 1 1 1 1
Add together 20% of 40 $\frac{2}{5}$ of 20 and $\frac{2}{3}$ of 21	Sarah is 24 years old. Peter is half as old as Sarah. Mike is $\frac{2}{3}$ of Peter's age. What is their total age?	Write down a decimal between 81% and 84% Write down a fraction between 70% and 80%	1 1 1 1 1 1 1 1 1
What are the next two numbers in these sequences 1, 2, 4, 8, 16, … ……and……. 1, 8, 27, 64, … ……and……	Put these decimals in order, starting with the largest. 0.302, 0.032, 0.32	 What fraction of this flag is shaded? How many more rectangles need to be shaded to fill $\frac{3}{5}$ of the flag?	1 1 1 1 1

			DO NOT WRITE IN THIS BOX
Work out $$\frac{2}{5} + \frac{2}{15}$$	**Work out** $$\frac{3}{7} - \frac{3}{5}$$	**Add together the following, giving your answer as a DECIMAL** $$\frac{1}{5}, \quad 27\% \text{ and } 0.708$$	1 1 1 1 1 1 1
What is the biggest number that divides exactly into 63 , 84 and 105 ?	**What is the smallest number that** 3, 8, and 21 **all divide into?**	**Find two numbers that have a difference of 6 and add up to 14** ……and…….	1 1 1
What is 0.4 written as a fraction? **What is 0.04 written as a fraction?** **What is 0.404 written as a fraction?**	**What is $\frac{1}{8}$ written as a decimal?** **What is $\frac{1}{80}$ written as a decimal?** **What is $\frac{3}{80}$ written as a decimal?**	**Name the shapes below** 	1 1 1 1 1 1 1 1

A survey is carried out to find out how many pets each student in year 6 has. The data is recorded in the table below.

Number of pets	Number of times	Total number of pets
0	25	0 x 25 =
1	31	
2	20	
3	8	
4	4	
5	2	

Complete the end column in the table

How many students are there in year 6?...

How many pets are there all together?...

Using the first two columns of the table, draw a bar chart to represent these results.

1
1
1
1

1

1
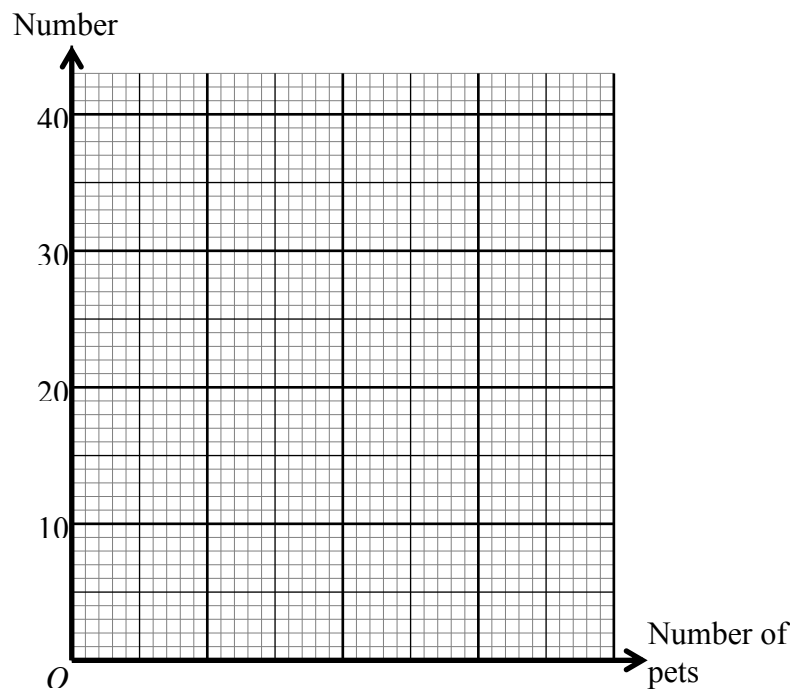
1

1

1

What are the missing numbers in the sums shown below?

36 - …… = 19	…….. – 47 = 24	280 ÷ …….. = 14	**3**
(7 + ……..) x 5 = 65	…….. x ……. = 49	$\frac{(34 - \text{……..})}{3} = 8$	**3**
6 x …… - 2 = 40	……. ÷ 8 = 14	$\frac{(\text{……. } + 4)}{7} = 3$	**3**

Here are some number cards

1	**4**	**3**	**9**
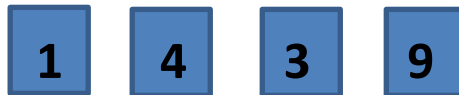
You can use each card once to make the number 4139 like this

4	**1**	**3**	**9**

What is the biggest 4 digit number you can make with the four cards?...................

1

What is the smallest 4 digit number you can make with the four cards?...................

1

What is the biggest even number you can make with three of the cards?

………………………………………..

1

Use some of the four number cards to make numbers as close as possible to the numbers given below

1

50 ➡ ▢▢

400 ➡ ▢▢▢

1

The diagram below is a scale drawing of a T shaped path of area 45m^2
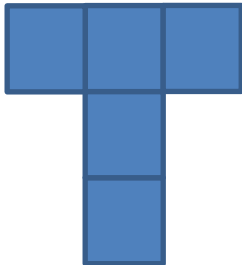
What is the area of each individual square?

....

What is the length of each side of each individual square?

....

What is the perimeter of the path?

....

1
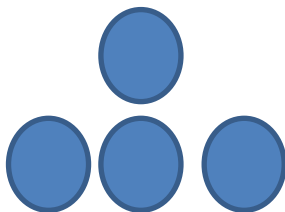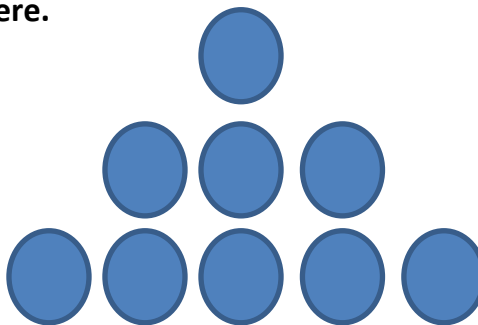
1

1

A pattern is made using balls as shown here.

Pattern1   Pattern 2   Pattern 3

Copy and complete the table below.

Pattern	1	2	3	4	5
Number of Balls	1	4			

How many balls are there in the 10th pattern?

....

How many balls are there in the 100th pattern?

....

Which pattern has 121 balls?

....
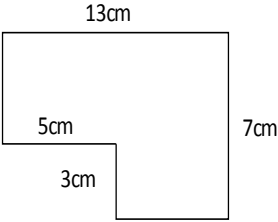
1

1
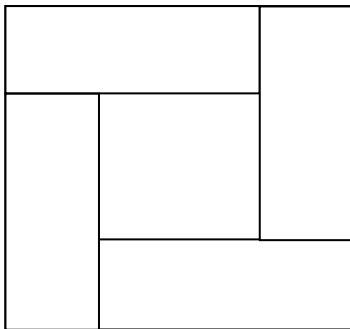
1

1

1

Which of these is the smallest fraction? Circle your answer.

$$\frac{1}{4} \quad \frac{1}{3} \quad \frac{5}{24} \quad \frac{4}{15}$$

1

Find the area of the following shape:

13cm

5cm   7cm

3cm

1

What is the 70th symbol in this endless string of symbols

%$£*%$£%$£...

1

In the number 67379, what is the difference between the values of the two 7s?

1

Daisy travels on a National Express coach.
It goes at an average speed of 80km/h for 45 minutes.
How far does Daisy travel?

1

	DO NOT WRITE IN THIS BOX
If a two pence coin is tossed two times, the side facing up noted (heads or tails), how many possible outcomes are there?	**1**

In the diagram below, a square of side 13cm is divided into four identical rectangles and a square of side 9cm.

(Diagram not to scale)

What are the side lengths of the rectangles

1

Half the pieces of chalk in a box were white, the rest were coloured. A third of the coloured ones were blue, a quarter of the rest were red and the others were yellow. If there are 6 yellow ones, how many pieces of chalk were there altogether?	**1**
What is the sum of all the odd numbers less than 100?	**1**
A kitchen clock gains 1 minute every two hours. If I put the clock to the correct time right at 9am on Saturday, what time will it show when the right time is 5pm the following Monday?	**1**

END OF EXAMINATION