

11+ Entrance Examination January 2013

MATHEMATICS

Time allowed: 45 minutes

NIVIVIE		• • • • • • • • • • • • • • • • • • • •
INMINIE	 	

- 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									

PAGE 1 ANSWER ALL QUESTIONS IN THE SPACES PROVIDED, SHOWING ANY NECESSARY WORKINGS

2030 – 997 =	What is 2030 x 20?	DO NOT WRITE IN THIS BOX
		1 1 1
		1
answers to write down	answer to write down	1
2030 X 23	20.30 X 2.3	1
		1
20.30 + 0.7 =	20.30 + 7 =	1
		1
		1
What is 500 x 15 ?	What is 6000 ÷ 100?	
		1
		1 1
		1
What is 500 x 1.5?	What is 6000 ÷ 200?	1
		1
		1
What is 500 v 0 152	What is 6000 ± 2002	1 1
vviidt is 500 x 0.15:	**************************************	1
	Use these last two answers to write down 2030 x 25 20.30 + 0.7 =	Use these last two answers to write down 2030 x 25 20.30 + 0.7 = 20.30 + 7 = What is 500 x 15? What is 500 x 1.5? What is 6000 ÷ 100?

Which of these three is the largest and which is the smallest?	What is 10% of £250?	Find one seventh of 280	DO NOT WRITE IN THIS BOX
65% 0.605 <u>3</u> 5	What is 5% of £250?		1 1
	What is 2 ¹ / ₂ % of £250?	Use your answer to	1 1 1
Largest =	Use your answers to	find four sevenths of 280	1
Smallest =	find 17 ¹ / ₂ % of £250		1 1
Add together	Richard is 18 years old.	Write down a decimal between 90% and 95%	1 1
25% of 20 <u>1</u> of 30	Adam is half as old as Richard.		1 1 1
5 and <u>2</u> of 18 3	Will is $\frac{2}{3}$ of Adam's age.	Write down a fraction between 80% and 90%	1 1 1
	What is their total age?		1
What are the next two numbers in these sequences	Put these decimals in order, starting with the largest.		1 1
2, 6, 12, 20, 30,	0.201, 0.021, 0.21		1
and		What fraction of this flag is shaded?	1
1, 4, 9, 16, 25, 36,		How many more rectangles need to be	1
and		shaded to fill $\frac{4}{5}$ of the flag?	

PAGE 3

Work out $\frac{2}{3} + \frac{2}{9}$	Work out $\frac{5}{8} - \frac{3}{5}$	Add together the following, giving your answer as a DECIMAL	DO NOT WRITE IN THIS BOX
		5, 35% and 0.604	1
			1
			1 1 1
What is the biggest number that divides exactly into	What is the smallest number that 3, 5, and 12	Find two numbers that have a difference of 8 and add up to 18	1
28 , 84 and 126 ?	all divide into?	and dad up to 10	1
			1
		and	
What is 0.3 written as a fraction?	What is $\frac{1}{4}$ written as a decimal?	Name the shapes below	1 1
What is 0.03 written as a fraction?	What is $\frac{1}{40}$ written as a decimal?		1 1 1 1
What is 0.303 written as a fraction?	What is $\frac{7}{40}$ written as a decimal?		1 1

A teacher asks the students in year 6 how many people live in their homes. She records her results in the table below.

Number of people in	Number of times	Total number of
house		people
3	45	3 x 45 =135
4	25	
5	17	
6	10	
7	3	

Complete the end column in the table

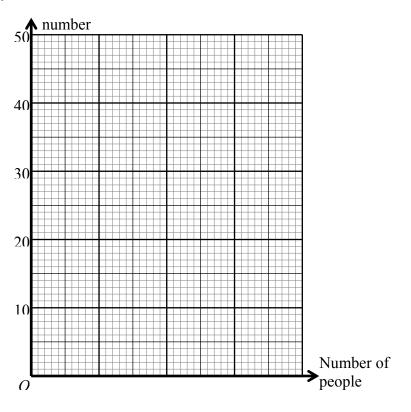
How many students are there in year 6?.....

1

How many people are there all together?.....

1

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



1

1

1

PAGE 5
What are the missing numbers in the sums shown below?

What are the missing numbers in the sums shown below?						
27 = 19	– 59 = 24	270 ÷ = 15	DO NOT WRITE IN THIS BOX			
(8 +) x 4 = 88	x = 25 (<u>24</u>) = 7					
3 x + 4 = 22	÷ 7 = 13	<u>(+ 4)</u> = 3 8	3			
Here are some number of	cards 2 5	3 8				
You can use each card once to make the number 2538 like this						
	2 5 3	8				
What is the biggest 4 digit number you can make with the four cards?						
What is the smallest 4 digit number you can make with the four cards?						
What is the biggest ever	n number you can make w	vith three of the cards?	1			
Use some of the four number cards to make numbers as close as possible to the numbers given below						
60						
400						

The diagram below is a scale drawing of a Z shaped path of area 20m ²						DO NOT WRITE IN THIS BOX
What is the a	rea of each ir	ndividual squ	are?			1
What is the le	ength of each	side of each	individual so	quare?		1
What is the p	erimeter of t	he path?				1
A pattern is made using balls as shown here. Pattern1 Pattern 2 Pattern 3						
Copy and con						1
Pattern Number of Balls	1	5	3	4	5	1
How many balls are there in the 10 th pattern?					1	
How many balls are there in the 100 th pattern?					1	
Which pattern has 117 balls?					1	

Which of these is the smallest fraction? Circle your answer.	DO NOT WRITE IN THIS BOX
$\frac{3}{4}$ $\frac{2}{3}$ $\frac{5}{12}$ $\frac{9}{14}$	1
I have forgotten the last two digits of my PIN number, but know that the first two digits are 8 and 6	
8 6 * *	1
However, I know that my PIN number is divisible by 3, 4 and 5. What is my PIN number?	
What is the 100^{th} symbol in this endless string of symbols $\& £ = \& £ = \& £ = \& £ =$	1
On holiday last year Phil bought 10 post cards at 45p each and 10 second class stamps at 27p each. How much change did he get from a £10 note?	1
Which of these fractions is the biggest? Circle your answer.	1
$\frac{1+2}{2+3} \frac{2+4}{2+3} \frac{1+2}{4+6} \frac{3+4}{2+3} \frac{1+4}{1+3}$	_

In a game of football the final score was 3-2. How many possible half time scores were there?	DO NOT WRITE IN THIS BOX
What is the sum of the first 40 whole numbers ?	
	1
How many numbers less than 100 are divisible by both 2 and 5?	1
Seven telegraph poles are equally spaced along a road. The distance between the first and the third pole is 268m. How far is it between the first and last pole?	1
A block of chocolate is divided between three friends. Paul gets half of it and Peter gets one third of it. Richard gets 100g of chocolate. How heavy was the bar originally?	1

END OF EXAMINATION