REIGATE GRAMMAR SCHOOL

13+ Entrance Examination 2018
MATHEMATICS

Paper 1

Non-Calculator Paper

Time Allowed: 30 minutes

SAMPLE

Name: .....

- Calculators are **NOT** allowed.
- Work through the paper carefully.
- Do not spend too much time on any single question.
- Show any working clearly in the spaces provided – marks may be lost if there is not enough working.
- **You do not have to finish everything**.

Total Marks Available = 40

Page	2	3	4	5	6	Total
Marks						
Out of	7	10	8	9	6	40

1. Complete the following table, leaving your answers in their simplest form:

Fraction	Decimal	Percentage
	0.24	
		65%
$\frac{21}{25}$		

[3]

2. What is the value of:

$$\frac{(2^3 + 4)^2}{\sqrt{4^2 - 7}}$$

..... [2]

3. It is given that 63 x 244 = 15372
What are the results of the following?

(a) $15372 \div 63$

..... [1]

(b) $15372 \div 122$

..... [1]

SAMPLE

4.	(a) What are the next two terms in the sequence: 13 10 7 4 ... ... (b) Write down an expression for the n^{th} term of this sequence. ..... (c) What will be the 100th term in this sequence?	[2] [2] [2]
5.	What is 23% of 64?	[3]
6.	What is the largest number that divides exactly into 57, 76 and 114?	[1]

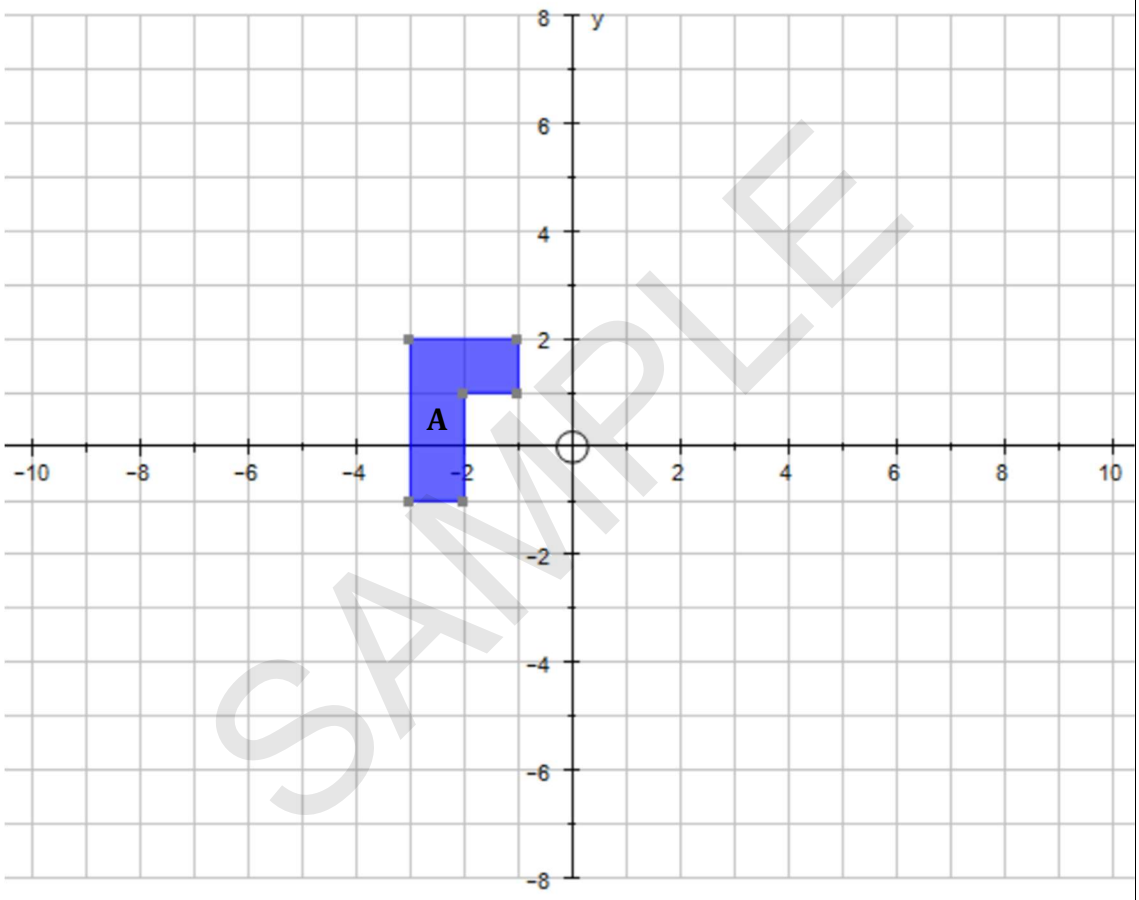
SAMPLE

7.	Put these three quantities in order of size, from smallest to largest. You must show your working out. $\frac{1}{5}$ 0.19 0.21% …… < …… < …… Smallest Largest	[2]
9.	Aaron is 24 years old. Ben is $\frac{2}{3}$ of Aaron's age. Cameron is $\frac{3}{8}$ of Aaron's age. What is their total age? ……	[3]
10.	Calculate: 0.47 x 3.9 ……	[3]

SAMPLE

11.	What fraction is half way between $\frac{1}{7}$ and $\frac{1}{9}$? ……	[2]
12.	Work out the following, making sure to show all of your steps and giving your answer in it's simplest form. (a) $2\frac{2}{3} - 1\frac{5}{7}$ …… (b) $2\frac{1}{4} \div \frac{5}{8}$ ……	[3] [3]
13.	What number could replace ■ so that the value of $\frac{■}{6}$ lies between 3 and 4? ……	[1]

SAMPLE

14.	The angles in a triangle are in the ratio of 1 : 3 : 5 Find the size of the largest angle.	[3]
15.	 SAMPLE (a) Translate shape **A** by the vector $\begin{pmatrix}-4\\2\end{pmatrix}$ and label this shape **B**. (b) Reflect shape **A** in the line y = x and label this shape **C**.	[1] [2]

END OF TEST