

# Mathematics

# PM

4/11/2019

9:00 AM – 11:00 AM

# REB

Rwanda Education Board

## Pupil's complete index number

Province/ City	District	Sector	School	Pupil	Year
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## Pupil's names

Surname: .....

Other names:

**NB : PUPIL'S INDEX NUMBER AND NAMES**

**MUST BE WRITTEN AS THEY APPEAR ON THE REGISTRATION FORM.**

## PRIMARY LEAVING NATIONAL EXAMINATIONS, 2019

### MATHEMATICS

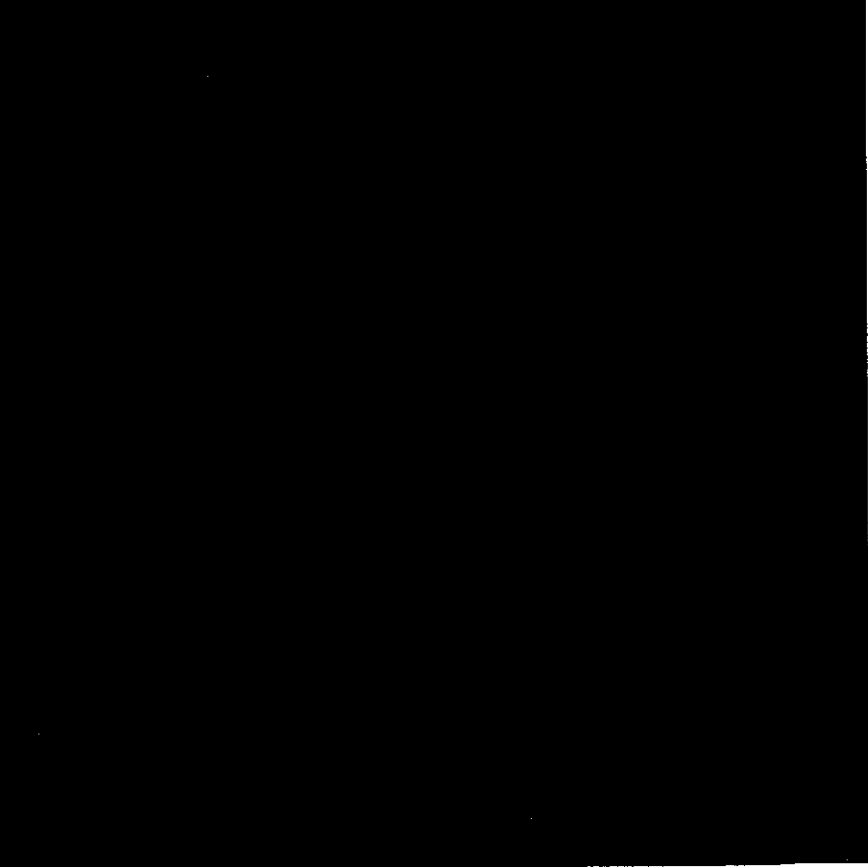
Duration: Two hours

Marks:

/100

### INSTRUCTIONS

- 1) Do not open this question paper until you are told to do so.
- 2) ***This paper consists of 12 pages and 35 questions. Before starting, check if all pages and all questions are there and arranged in ascending order.***
- 3) Answer **ALL** questions in this paper.
- 4) Read each question carefully before answering it.
- 5) Answer the questions in the space provided in this paper.
- 6) Show your working clearly. Marks will be given for showing steps.  
All rough work must be done in the space under each question.
- 7) You are allowed to use a ruler, and a protractor.
- 8) **You are NOT allowed to use a calculator.**
- 9) You must use a **blue** or black **pen**.



**ANSWER ALL QUESTIONS IN THIS PAPER (100 marks)**

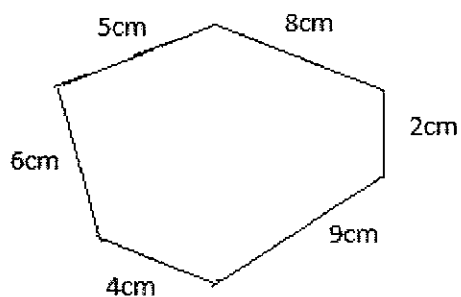
<b>Do rough work below each question</b>	<b>Show the working steps and final answer in this column</b>
1) Write the biggest number of 8 digits formed by the digits below: 2;3;8;5;4;7;1;9 <b>(2marks)</b>	
2) Arrange the following integers from the lowest to the highest. -8;-1;+7;+1;+2;-4 <b>(2marks)</b>	
3) Write the place value of digit 1 in the following number: 18,526,739 <b>(2marks)</b>	
4) Write in words the following number: 277,818,599 <b>(2marks)</b>	
5) If $b = 4$ , calculate: $48 - (15 + b) =$ <b>(2marks)</b>	
6) Find 5% of 45000Frw <b>(2marks)</b>	
7) Solve for $x$ in the following equation: $2(x - 1) = x - 3$ <b>(2marks)</b>	

<p>8) Round off 76,948 to the nearest thousands <b>(2marks)</b></p>	
<p>9) Express the following fraction as a decimal to 2 decimal places.</p> $2\frac{5}{6} =$ <p style="text-align: right;"><b>(2marks)</b></p>	
<p>10) Calculate: <math>4^3 - \sqrt{100} =</math> <b>(2marks)</b></p>	
<p>11) Workout the calculation below and simplify the answer.</p> $\frac{4.28 + 63.12}{0.02} =$ <p style="text-align: right;"><b>(2marks)</b></p>	
<p>12) Find the next two numbers in the digits below:</p> $2; 5; 11; 23; \text{---}; \text{---}$ <p style="text-align: right;"><b>(2marks)</b></p>	

<p>13) Workout the fraction below and simplify the answer.</p> $\left(\frac{1}{5} + 3\frac{2}{6}\right) : \frac{8}{6} =$ <p style="text-align: right;"><b>(2marks)</b></p>	
<p>14) 10,500 English books are shared among 50 students. Find the number of books shared by each student.</p> <p style="text-align: right;"><b>(2marks)</b></p>	
<p>15) Calculate: <math>(9) \times (-6) =</math></p> <p style="text-align: right;"><b>(2marks)</b></p>	
<p>16) Write in words the following number: 21,892,045</p> <p style="text-align: right;"><b>(2marks)</b></p>	
<p>17) Evaluate: <math>6^6 - 4^4 =</math></p> <p style="text-align: right;"><b>(2marks)</b></p>	
<p>18) Find <i>GCF</i> or Greatest Common Factor of 120 and 96</p> <p style="text-align: right;"><b>(2marks)</b></p>	

19) Find the size of the exterior angle of a regular polygon if its interior angle is  $80^\circ$ .  
**(3marks)**

20) Find the perimeter of the figure below



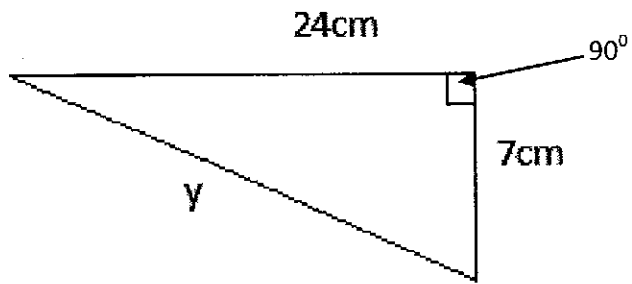
**(2marks)**

21) A man has 12 notes of 5000 *frw*; 20 notes of 1000 *frw* and 40 notes of 500 *frw*. Find the total amount of money the man has.  
**( 2marks)**

22) There are 24 hours in one day, and there are 60 minutes in one hour. How many minutes are there in one day?  
**(2marks)**

<p>23) Calculate <math>3\frac{2}{5} + \frac{3}{4} =</math> <b>(2marks)</b></p>	
<p>24) Find the circumference of a circular garden whose radius is <math>36\text{cm}</math> ( use <math>\pi = 3,14</math>) <b>(2marks)</b></p>	
<p>25) Write the following in descending order:   <math>0.05; 0.12; \frac{1}{2}; 0.55; \frac{2}{5}</math> <b>(2marks)</b></p>	
<p>26) Find the number whose square roots is 12. <b>(2marks)</b></p>	

27) In the figure below:



(a) Find the length of the side marked by the letter  $y$ .  
**(1mark)**

(b) Calculate the area of the figure above. **(2marks)**

28) If an English Exam started at 8:30 a.m and took  $3\frac{1}{2}$  hours, at what time did it end?  
**(3marks)**

29) Joana spends 160,000FRW on school fees. This is 10% of her monthly salary. How much is her salary?

**(3marks)**



30) A water tank has a radius of  $4,4m$  and a height of  $8m$ . Find its volume. ( use  $\pi = 3,14$ ) **(3marks)**

31) a) A shopkeeper borrowed  $240,000FRW$  for 6 months at an interest rate of 20% per annum .  
(i) Calculate the interest he should pay after the 6 months **(2marks)**

(ii) Calculate the total amount of money he will pay to the bank. **(2marks)**

b) Benita bought a radio at  $45,000frw$  and sold it at  $32,000frw$

(i) Find the loss Benita made. **(1mark)**

(ii) Calculate the percentage of the loss **(2marks)**

32) A woman went to the market and bought the following items:

10kg of rice at 1,000Frw/kg

20kg of meat at 3,000Frw/kg

5litres of oil at 1,500Frw/litre

15kg of Irish potatoes at 300Frw/kg

(i) Complete the table below showing the budget she spent  
(5marks)

Item n°	Unit price	Quantity	Total amount
1. Rice	1000Frw	10kg	1,000frw x 10 = 10,000 frw
2.	....	.....	...
3.	.....	....	....
4.	.....	.....	.....
			Total = ..... Frw

(ii) On what item did she spend most money? Why?

(1mark)

(iii) What was her balance after spending the money if she had 92,000Frw in her pocket before buying? (1mark)

33) Alan left City A for City B in his car at 10:00 a.m moving at a speed of 30km/hr. At the same time Norah left city B for City A in a new car at a speed of 15km/hr. The distance from City A to B is 480km.

(i) At what time did the two drivers meet? **(3marks)**

(ii) What distance had Alan covered before meeting Norah? **(2marks)**

(iii) What distance had Norah covered before meeting Alan? **(2marks)**

34)

a) If a Kinyarwanda examination at a certain school started at 8.30 a.m and ended at 11 a.m, how long did the examination take? **(3marks)**

b) Find the surface area of a cube with a side length of 3 cm. **(2marks)**

c) If the total surface area of a cube equals  $96 \text{ cm}^2$ , what is the length of one side of the cube? **(2 marks)**

35) The table below shows how primary six (P6) class scored in Kinyarwanda Test out of 100 marks.

<b>Marks</b>	50	20	45	30	70	65
<b>Frequency</b>	2	4	6	7	5	9

a) Complete the table below: **(2marks)**

<b>Marks(x)</b>	<b>Frequency(f)</b>
30	7
$\sum x = \dots$	$\sum f = \dots$

b) Answer the following questions

(i) How many pupils are in P6? **(1mark)**

.....

(ii) What is the mode marks? **(1mark)**

.....

(iii) Find the modal frequency **(1mark)**

.....

(iv) Calculate the range marks **(1mark)**

.....

(v) Find the mean marks? **(1mark)**

.....