

# MATHEMATICS

## PM

12/11/2018 9AM - 11AM



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, 2018

### MATHEMATICS

**Duration: Two hours**

**Marks:**

### INSTRUCTIONS

- 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 are 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 question 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 must use a **blue** or **black** pen.
  - 8) You are allowed to use a ruler and a protractor.
  - 9) You are **NOT** allowed to use a calculator.



YOU MAY DO ROUGH WORK IN THE SPACE PROVIDED BELOW EACH QUESTION.	GIVE YOUR ANSWERS IN THE SPACE PROVIDED IN THIS COLUMN. SHOW THE WORKING STEPS.
1) Subtract: $867,523 - 374,238$ . <b>(2marks)</b>	
2) Test whether 298 is divisible by 9. <b>(2marks)</b>	
3) If $a + b = 20$ and $b = 8$ , find the value of a. <b>(2marks)</b>	
4) Write in figures: Four hundred forty five million, five hundred eight four thousand and four hundred nine. <b>(2marks)</b>	
5) Round off 412928.92 to the nearest whole number. <b>(2marks)</b>	
6) What is the place value of 7 in the figure 75 325 961? <b>(2marks)</b>	

7) Work out: $3 \times (15+5)-7=$ <b>(2marks)</b>	
8) How many millilitres of water does a bottle of five litres have? <b>(2marks)</b>	
9) Find the value of $-3a-4b$ if $a=2$ and $b=-3$ . <b>(2marks)</b>	
10) Arrange in ascending order $\frac{3}{10}; \frac{5}{12}; 0.75; \frac{2}{15}$ <b>(2marks)</b>	
11) Solve for $x$ the following equation: $x-7=-2x-1$ <b>(2marks)</b>	
12) Work out $\frac{0.72 \times 0.24}{0.48} =$ <b>(2marks)</b>	

<p>13) Simplify the expression:</p> $2(a - 3) + 4b - 2(a - b - 3) + 5$ <p><b>(2marks)</b></p>	
<p>14) The interior angle of a regular polygon is <math>145^\circ</math>. Find the size of the exterior angle of the polygon.</p> <p><b>(2marks)</b></p>	
<p>15) Find the area of a regular pentagon whose side is 4cm and apothem is 2cm.</p> <p><b>(2marks)</b></p>	
<p>16) Calculate <math>3\frac{5}{7} + 2\frac{2}{3} =</math></p> <p><b>(2marks)</b></p>	
<p>17) The circumference of a circle is 314cm. Find its diameter in cm (use <math>\pi = 3,14</math>).</p> <p><b>(2marks)</b></p>	
<p>18) If two numbers have a difference of 381 and a quotient of 4. Determine these numbers.</p> <p><b>(2marks)</b></p>	

<p>19) A man's step is 80cm. How many such steps can he make in a distance of 40dm? <b>(2marks)</b></p>	
<p>20) Share 170 notebooks among 9 pupils. Give your answer as a mixed fraction. <b>(2marks)</b></p>	
<p>21) A motorcyclist rides 15km in one hour. How many hours does he take to ride 45km? <b>(2marks)</b></p>	
<p>22) Find the area of a circle whose diameter is 28m. <b>(2marks)</b></p>	
<p>23) Given that the total number of pupils in P6 class is 32 and the difference between the number of boys and that of girls in the class is 10.</p> <p>(a) Calculate the number of boys in the class. <b>(1mark)</b></p> <p>(b) Calculate the number of girls in the class. <b>(1mark)</b></p>	

<p>24) Calculate 12% of 280,000. <b>(2marks)</b></p>	
<p>25) Dora has 10,000Frw. She took <math>\frac{3}{5}</math> of that money to buy shoes. Calculate the sum of money she spent on shoes. <b>(2marks)</b></p>	
<p>26) A man's salary increased in the ratio 2:3. If he was earning 70,000Frw. Calculate his new salary. <b>(3marks)</b></p>	
<p>27) The cost of a Science book and a bag is 75,000Frw altogether. The book costs 15,000Frw more than the bag. Find: (a) The cost of the bag. <b>(2marks)</b>  (b) The cost of the book. <b>(2marks)</b></p>	

<p>28) A woman deposited 600,000 Frw in the Bank for 2 years at an interest rate of 4% per year.</p> <p>(a) Calculate the interest she got after the second year. <b>(2marks)</b></p> <p>(b) Calculate the total amount she got after 2 years. <b>(1mark)</b></p>	
<p>29) (a) Name the regular polygon which has 12 sides. <b>(1mark)</b></p> <p>(b) What is the interior angle of a regular octagon? <b>(1mark)</b></p>	
<p>30) The area of a rectangle is 15 square decimeters and its length is 50 centimeters. Find the width of the rectangle. Give your answer in centimetres. <b>(3marks)</b></p>	
<p>31) Manu, Ally and Eden are friends. They contributed money for paying the insurance of the old people in their cell in 3 to 4 to 5 parts respectively. Manu contributed 40,000Frw.</p> <p>(a) How much did Ally contribute? <b>(3marks)</b></p>	



<p>(b) How much did Eden contribute? <b>(3marks)</b></p> <p>(c) Calculate the total contribution of the three members. <b>(1mark)</b></p>	
<p>32) In a Conference hall, <math>\frac{2}{6}</math> of seats are filled by women, <math>\frac{1}{5}</math> by men and <math>\frac{1}{3}</math> by children.</p> <p>(a) What fraction of the conference hall is occupied? <b>(2marks)</b></p> <p>(b) What fraction of the conference hall is not occupied? <b>(1mark)</b></p> <p>(c) How many people are in the conference hall if the whole conference room contains 9000 seats? <b>(1mark)</b></p> <p>(d) Calculate the number of men who are present. <b>(1mark)</b></p> <p>(e) Calculate the number of women who are present. <b>(1mark)</b></p> <p>(f) Calculate the number of children who are present. <b>(1mark)</b></p>	

33) (a) What is the volume of a cylinder which is 4cm high and whose circular face has a diameter of 2cm? **(2marks)**

(b) Three friend Lorina, Lariga and Lona contributed to start a business. Lorina paid  $\frac{4}{10}$  of the total contribution, Lariga contributed  $\frac{3}{10}$  of the total contribution.

(i) What fraction did Lona contribute? **(2marks)**

(ii) If Lona contributed 60,000 Frw, what was their total contribution? **(3marks)**

34) The table below shows how primary four (P4) class scored in English Test out of 100.

Marks	50	30	40	42	80	70
Frequency	2	5	8	10	6	4

(a) Complete the table across with the above information (the first row was completed for you). **(3marks)**

(a)

Marks(x)	Frequency(f)
30	5
$\sum x = \dots$	$\sum f = \dots$

(b) How many pupils are in P4? **(1mark)**

(c) Find the highest marks in the class.  
**(1mark)**

(d) What is the mark obtained by many students?  
**(1mark)**

(e) How many pupils obtained the lowest marks?  
**(1mark)**

35) A bicyclist covered a journey from Centre A to Centre B in 3 hours at a speed of 20km/h and he took 1 hour to return through the same distance.

(a) Calculate the distance from A to B.  
**(2marks)**

(b) Calculate the total distance of the whole journey.  
**(1mark)**

(c) Calculate the total time used to cover the whole journey. **(2marks)**

(d) Calculate the average speed used for the whole journey.  
(Write the answer in m/s). **(2marks)**