Pupil's complete index number						
Province /City	District	Sector	School	Level	Pupil	Year
☐	☐	☐☐	☐☐	☐☐	☐☐☐	☐☐☐

Pupil's names

Surname: ....

Other names: ....

NB: PUPIL'S INDEX NUMBER AND NAMES **MUST** BE WRITTEN AS THEY APPEAR ON THE REGISTRATION FORM

NESA | NATIONAL EXAMINATION AND SCHOOL INSPECTION AUTHORITY

PRIMARY LEAVING NATIONAL EXAMINATIONS, 2021

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 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 on 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.**

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

Do rough work below each question.	Show the working steps and final answer in this column.
1) Write the following number in words 29 802 604 **(2 marks)**	
2) Write the place value of digit 6 in the number 4567891 **(2 marks)**	
3) Round off 86948 to the nearest thousands **(2 marks)**	
4) Workout without using a number line. a) (+4) x (-8) = **(1mark)** b) (+12):(+3)= **(1mark)**	

5) Find the Least Common Multiple of numbers $6 ; 12$ and 18 **(2 marks)**

6) Workout $(\frac{2}{3}x\frac{15}{4}):\frac{5}{6} =$ **(2 marks)**

7) Calculate the value of $3x^2y - xz$ if $x = -2$, $y = -1$ and $z = 4$ **(2 marks)**

8) Calculate the price of $12kg$ of beans if $6kg$ cost $2760 frw$. **(2 marks)**

9) Decrease 8000 by 14% **(2 marks)**

10) Convert $9\dfrac{2}{5}$ into decimals. **(2 marks)**

11) Workout $23hg + 50kg = \ldots g = \ldots mg$ **(2 marks)**

12) Simplify

$9a^4b^3 \div 3a^2b =$ **(2 marks)**

13) Find the two missing fractions in the sequence below:

$\dfrac{1}{2}; \dfrac{1}{4}; \dfrac{1}{8}; \dfrac{1}{16}; \ldots; \ldots$ **(2 marks)**

14) Use quick arithmetic to work out the following:

$84 \times 25 =$ **(2 marks)**

15) Express 72 as a product of its prime factors.

(2 marks)

16) Subtract $:3\frac{1}{4} - 2\frac{3}{8} =$ **(2 marks)**

17) A school library has 120 shelves with 98 books each. How many books are there in the library?

(2 marks)

18) Eric has 5 notes of 2000 *frw* , 2 notes of 5000*Frw* and 20 notes of 500*F* . Calculate the total amount of money he has.   **(2 marks)**

19) Find the circumference of a circular garden whose radius is 24*cm* (use $\prod = 3,14$) **(2 marks)**

20) Find the number whose square root is 16.

(2 marks)

21) Find the complement of 60^0.

(2 marks)

22) Evaluate $5^2 + 4^3 =$

(2 marks)

23) Convert $18000 \sec = ...hours.....mn$

(2 marks)

24) Workout $\dfrac{\sqrt{400} + \sqrt{625}}{\sqrt{100}} =$

(2 marks)

25) Solve the equation
$(2x-1) = 5(x-2)$

(3 marks)

26) The height of the right angle triangle is $3cm$ and its hypotenuse is $5cm$.

    (a) Calculate the length of the 3rd side of the triangle in cm **(2 marks)**

    (b) Calculate the area of the triangle.   **(1 mark)**

27) 20% of a number is 60. What is the number?
        (2 marks)

28) In a class there are 60 children. The ratio of boys to girls is $2:3$ respectively.

    a) How many boys are in the class?   **(2marks)**

    b) How many girls are in the class?   **(1 mark)**

29) Mary spends $125,000FRW$ on buying food. This is 5% of her monthly salary. How much is her salary?
        (3 marks)

30) A car took 6 hours to cover a distance. It moved at a speed of 90 km/hr. Calculate the distance it covered.   **(3 marks)**

31) a) Find the interior angle sum of a pentagon
(3 marks)

b) How many sides does a hexagon have?
(1 mark)

c) Find the centre angle of a regular hexagon.
(3 marks)

32) a) An amount of money gained an interest of
144,000*FRW* . It was invested for 9 years. If the
simple interest rate is 6%, calculate the
principal amount. **(5marks)**

b) Convert 8.09 into a fraction and show your
working. **(2marks)**

33) a) Kamana bought a bicycle at 60000 *frw* and
after a short period of time sold it at 50000 *frw* .

(i) Calculate his loss. **(1 mark)**

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

b) Calculate the simple interest of 48000000 *frw* at
6% rate for three months. **(4 marks)**

34) Fifi mixed 4kg of yellow maize flour with an unknown quantity of white maize flour. The cost price of the mixture was 800Frw per kg.

Yellow maize flour cost 900 Frw per kg and the white maize flour costs 700 Frw per kg when not mixed

Find the quantity in kilograms of the white maize

flour used.

Show your working. **(7 marks)**

35) The data below shows the marks obtained (out of 100) by pupils in an English test:

88 56 56 76 23 10 89 90 43 23 50 12
54 76 23 22 43 54 29 74 66 43 12 64

a) Represent this data in a table of two columns (Column 1: Marks, Column 2: Number of pupils obtaining those marks).   (3 marks)

b) How many pupils did the test?

(1mark)

c) How many pupils scored 76% marks?

(1mark)

(d) How many pupils got less than 50% marks?

(1mark)

(e) What was the highest mark   scored?

(1mark)