Mathematics
PM
08/07/2024
09: 00-11: 00 AM

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NESA NATIONAL EXAMINATION AND SCHOOL INSPECTION AUTHORITY

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

PRIMARY LEAVING NATIONAL EXAMINATIONS, 2023-2024

MATHEMATICS

Duration: Two hours

Marks: /100

Instructions to candidates:

1) Do not open this question paper until you are told to do so.

2) Attempt ALL questions in this paper.

3) Read each question carefully before answering it.

4) Answer the questions in the space provided in this question paper.

5) Show your working clearly. Marks will be given for showing steps.

6) 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.

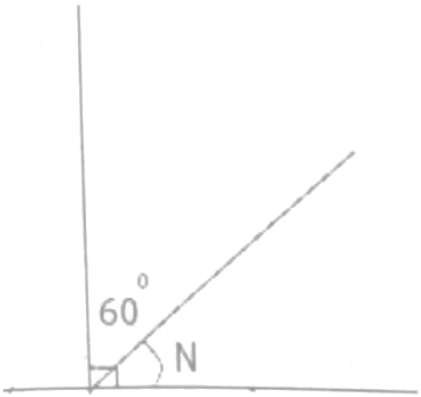
Attempt all questions (100 marks)

Do rough work below each question	Show the working steps and final answer in this column
1 Write the following number in words: 12,056,418 **(2 marks)**	
2) Given the following digit numbers: 8; 0; 5; 7; 2 a) Write the biggest whole number formed by these digits. **(1 mark)** b) Write the smallest number formed by these digits. **(1mark)**	
3) Subtract vertically 4,325,678-2,478,529 = **(2 marks)**	
4) Convert 50,000 Frw into USD if 1USD is equal to 1,000 Frw **(2 marks)**	

5) Define the term "scale" **(2 marks)**	
6) Round off 5.297 to the nearest hundredths. **(2 marks)**	
7) Use <, > or = to compare the following: **(2 marks)** a) $\frac{1}{6}$ ☐ 0.32 b) 145,700 ☐ 1457×100	
8) Workout 15a+20ca=……ca **(2 marks)**	
9) Convert 0.95 into fraction and simplify the answer completely. **(2 marks)**	

10) Simplify completely $a^3b^2a^4bc =$ **(2 marks)**	
11) Find the missing two fractions in the sequence $\frac{1}{3};\frac{1}{6};\frac{1}{12};\ldots;\ldots$ **(2 marks)**	
12) Work out. a) (-12)x(-10)= **(1 mark)** b) (-20)+(+4)= **(1 mark)**	
13) Choose one letter which corresponds with the correct definition of the term "Probability".**(2 marks)** a) Probability is the chance that an event will less likely happen. b) Probability is the chance that something will happen. c) Probability means that an event will not happen.	
14) Work out the following: 50 kg +23 hg=.....dg **(2 marks)**	

15) Complete the following sentences with discrete data" or "quantitative data". a) Data with numerical values is called ……**(1 mark)** b) The values for numerical data can be whole numbers only. Such data is ……. (**1 mark)**	
16) Share equally 15,000 books among 5 schools. How many books will each school get? **(2 marks**)	
17) Fill in the missing number: $1\frac{3}{4}$ of 360 is equal to ..... **(2 marks**)	
18) Find the next two numbers in the following sequence 4; 7; 10; ... **(2 marks)**	
19) Use quick multiplication to calculate the following: 56x11= **(2 marks)**	

20) Find the value of angle N, if N is the Complementary angle of 60°, **(2 marks)**  	
21) How many poles are required to make a circular fence of 45 m if the poles are 5 m apart? **(2 marks)**	
22) If a test started at 8:45 p.m. and ended at 10:45 p.m. How long did the test take? **(2 marks)**	
23) Workout $\frac{3}{4}+\frac{1}{2}$ **(2 marks)**	
24) Find the perimeter of a rectangular garden whose length and width are 15m and 10m respectively **(2 marks)**	

25) Exterior angle of a regular polygon is 720, Calculate its interior angle. **(2 marks)**	
26) Find the Highest Common Factor of numbers 30, 36 and 48. **(3 marks)**	
27) Find the value of x in the equation 3(x+1)=9 **(3 marks)**	
28) If $\frac{3}{4}$ of the pupils in P6 class are girls, find the number of boys who are in class if there are 48 pupils. **(3 marks)**	
29) A circular garden has a radius of 15 cm. Find its area ($\pi = 3.14$). **(3 marks)**	
30) Find the volume of a cube whose sides are 7dm. Give the answer in cm^3 (**3 marks)**	

31) Mugabo and Kaliza shared 120,000 Frw in the ratio of 3:5

a) Find their total ratio. **(1 mark)**

b) How much money did Mugabo get? **(2 marks)**

c) How much money did Kaliza get? **(2 marks)**

d) How much more money did Kaliza get than Mugabo **(2 marks)**

32) A man deposited 100,000 Frw on a fixed saving account that earns 3% simple interest monthly.

a) Find the interest earned after 5 years. **(4 marks)**

b) Calculate the total amount on his account **(3 marks)**

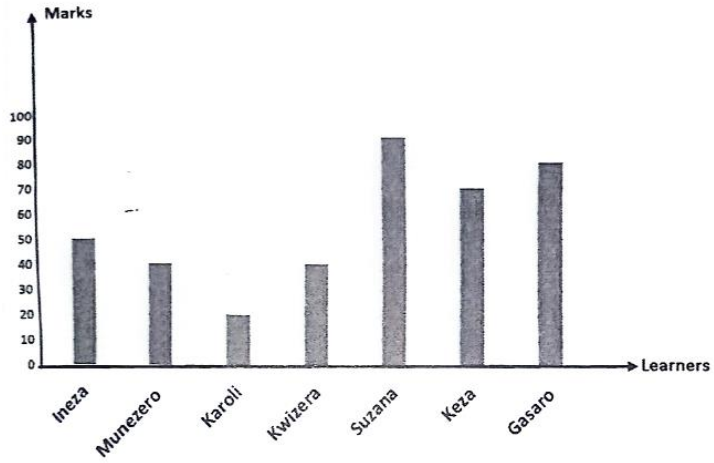
33) Mukamana went to the market and bought the following items: meat, rice and oil.

a) Complete the table below. (6 marks)

Items	Price of each	Total expenses
4kg of meat	4,500frw/kg	**……**
67kg of rice	**……..**../kg	93, 800frw
……..litres of oil	2,500frw/litre	7,500frw
Total expenditure		……’

b) If she had 150,000Frw. How much did she save? (1 mark)

35) Study the diagram below which shows marks scored by learners in French test out of 100.



a) How many learners did the test? **(1 mark)**
b) How many learners got the same marks? **(1 mark)**
c) Write the names of learners who got the same marks. **(1 mark)**
d) How many learners got less than 50% marks? **(1 mark)**
e) Name the learner who got the highest marks? **(1 mark)**
f) Name the learner who got the lowest marks? **(1 mark)**
g) Write the marks obtained from the lowest to the highest? **(1 mark)**

MARKING GUIDES MATHEMATICS PLE 2023-2024

Do rough work below each question	Show the working steps and final answer in this column
1 Write the following number in words: 12,056,418 (2 marks)	**12,056,418: Twelve million, fifty-six thousand, four hundred eighteen.**
2) Given the following digit numbers: 8; 0; 5; 7; 2 a) Write the biggest whole number formed by these digits. (1 mark) b) Write the smallest number formed by these digits. (1mark)	**a)87520** **b)20578**
3) Subtract vertically 4,325,678-2,478,529 = (2 marks)	4,325,648 -2,478,529 1,847,149
4) Convert 50,000 Frw into USD if 1USD is equal to 1,000 Frw (2 marks)	50000 | 1000 50USD

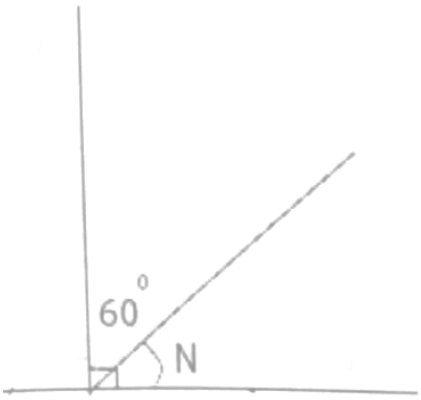
5) Define the term "scale" **(2 marks)**	**Scale: is a set of levels or number which are used in a particular system of measuring things**
6) Round off 5.297 to the nearest hundredths. **(2 marks)**	**5.297=5.30**
7) Use <, > or = to compare the following: **(2 marks)** a) $\frac{1}{6}$ ☐ 0.32 b) 145,700 ☐ 1457×100	**a)** $\frac{1}{6}$ **<** **0.32** **b) 145,700** **=** 1457×100
8) Workout 15a+20ca=……ca **(2 marks)**	**150= 1500 ca** **20 ca = + 20 ca** **1520ca**
9) Convert 0.95 into fraction and simplify the answer completely. **(2 marks)**	$\frac{95}{100}=\frac{19}{20}$

10) Simplify completely $a^3b^2a^4bc=$ **(2 marks)**	$a^3b^2a^4bc=a^7b^3c$
11) Find the missing two fractions in the sequence $\frac{1}{3};\frac{1}{6};\frac{1}{12};\ldots;\ldots$ **(2 marks)**	$\frac{1}{24};\frac{1}{48}$

12) Work out. a) (-12)x(-10)= **(1 mark)** b) (-20)+(+4)= **(1 mark)**	**a) (-12)x(-10)= +120** **b) -20+4=-16**
13) Choose one letter which corresponds with the correct definition of the term "Probability". **(2 marks)** a) Probability is the chance that an event will less likely happen. b) Probability is the chance that something will happen. c) Probability means that an event will not happen.	**a) Probability is the chance that an event will less likely happen.**
14) Work out the following: 50 kg +23 hg=.....dg **(2 marks)**	50kg= 500,000dg 23kg =+23000dg 523,000dg

15) Complete the following sentences with discrete data" or "quantitative data". a) Data with numerical values is called ……**(1 mark)** b) The values for numerical data can be whole numbers only. Such data is ……. (**1 mark)**	**a) Quantitative data** **b) discrete data**
16) Share equally 15,000 books among 5 schools. How many books will each school get? **(2 marks)**	15000:5=3000 books
17) Fill in the missing number: $1\frac{3}{4}$ of 360 is equal to ..... **(2 marks**)	$\frac{7}{4} \times 360 = 630$ of 360
18) Find the next two numbers in the following sequence 4; 7; 10; ... **(2 marks)**	4; 7; 10; **13**
19) Use quick multiplication to calculate the following: 56x11= **(2 marks)**	(56×10)+56=560 + 56 616

20) Find the value of angle N, if N is the Complementary angle of 60°, **(2 marks)**	$N=90^0$-60°=30°

	
21) How many poles are required to make a circular fence of 45 m if the poles are 5 m apart? **(2 marks)**	$\text{Number of poles} = \left\lceil \frac{\text{Circumference}}{\text{Distance between poles}} \right\rceil + 1$ $\text{Number of poles} = \left\lceil \frac{45}{5} \right\rceil + 1$ Number of poles = 9+1=10 Poles
22) If a test started at 8:45 p.m. and ended at 10:45 p.m. How long did the test take? **(2 marks)**	22:45 -20:45 2hrs
23) Workout $\frac{3}{4}+\frac{1}{2}$ **(2 marks)**	$\frac{3+2}{4}=\frac{5}{4}=1\frac{1}{4}$
24) Find the perimeter of a rectangular garden whose length and width are 15m and 10m respectively **(2 marks)**	$P=(L+W)\times 2=$ $(15m+10m)\times 2=25m\times 2=50m$
25) Exterior angle of a regular polygon is 720, Calculate its interior angle. (2 marks)	Interior angle = 180°-72° =1080
26) Find the Highest Common Factor of numbers 30, 36 and 48. **(3 marks)**	HCD=2x3=6
27) Find the value of x in the equation 3(x+1)=9 **(3 marks)**	3x+3=9 3X=9-3 3x=6 x=2
28) If $\frac{3}{4}$ of the pupils in P6 class are girls, find the number of boys who are in class if there are 48 pupils. **(3 marks)**	Boys = $48\times\frac{3}{4}=36$ pupils

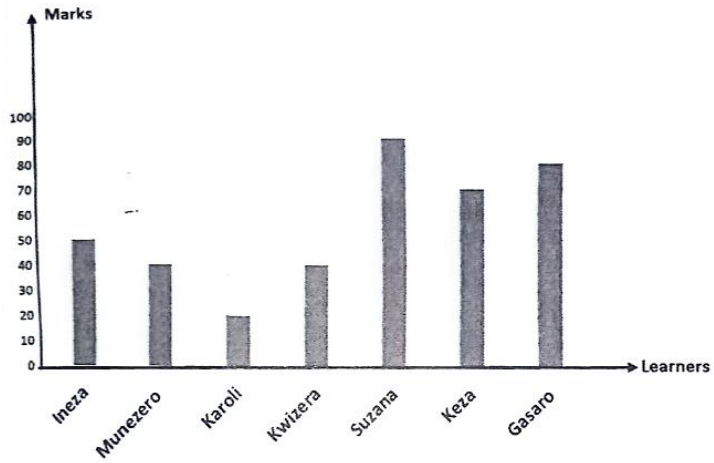
29) A circular garden has a radius of 15 cm. Find its area ($\pi = 3.14$). **(3 marks)**	$A = R \times R \times \pi = 15\text{cm} \times 15\text{cm} \times 3.14$ $= 706.50\text{cm}^2$
30) Find the volume of a cube whose sides are 7dm. Give the answer in cm^3 (**3 marks)**	$U = 7\text{dm} \times 7\text{dm} \times 7\text{dm}$ $= 343\text{dm}^3 = 343000\text{cm}^3$

31) Mugabo and Kaliza shared 120,000 Frw in the ratio of 3:5 a) Find their total ratio. **(1 mark)** b) How much money did Mugabo get? **(2 marks)** c) How much money did Kaliza get? **(2 marks)** d) How much more money did Kaliza get than Mugabo **(2 marks)**	a) 3+5=8 b) Mugabo= $\frac{3\times120000}{8} = 45000Frw$ c) Kaliza $= \frac{120000\times5}{8} = 75000Frw$ d) Diff=75000-45000=25000frw
32) A man deposited 100,000 Frw on a fixed saving account that earns 3% simple interest monthly. a) Find the interest earned after 5 years. **(4 marks)** b) Calculate the total amount on his account **(3 marks)**	a) $I = \frac{1000000\times3\times5}{100\times12} = 15000Frw$ b) Amount=100000+115000FRW
33) Mukamana went to the market and bought the following items: meat, rice and oil. a) Complete the table below. (6 marks) b) If she had 150,000Frw. How much did she save? (1 mark)	a)

Items	Price of each	Total expenses
4kg of meat	4,500frw/kg	…….
67kg of rice	……../kg	93, 800frw
……..litres of oil	2,500frw/litre	7,500frw
Total expenditure		……’

Items	Price of each	Total expenses
4kg of meat	4,500frw/kg	**4.800.0**
67kg of rice	**1400**.../kg	93, 800frw
3litres of oil	2,500frw/litre	7,500frw
Total expenditure		**44.9300F**

b) 150000-119300f = 30700 F

35) Study the diagram below which shows marks scored by learners in French test out of 100.  a) How many learners did the test? **(1 mark)** b) How many learners got the same marks? **(1 mark)** c) Write the names of learners who got the same marks. **(1 mark)** d) How many learners got less than 50% marks? **(1 mark)** e) Name the learner who got the highest marks? **(1 mark)** f) Name the learner who got the lowest marks? **(1 mark)** g) Write the marks obtained from the lowest to the highest? **(1 mark)**	a) 7 learners b) 2 learners c) munezero and Kruijena d) 3 learners e) Suzana f) karoli g) 80-10=70 marks