KOLFRAM EDUCATIONAL SERVICES KAMPALA

PRE NATIONAL MOCK EXAMINATIONS 2024

SET FIVE

MATHEMATICS

*Time allowed: **2** hours 30 minutes*

Index Number:

EMIS Number						Personal Number		

Candidate's Name: .....

Candidate's Signature: .....

School Name: .....

District Name: .....

DO NOT OPEN THIS BOOKLET UNLESS YOU ARE TOLD TO DO SO

Read and follow these instructions carefully:

1. This paper has **two** sections: **A** and **B**. Section **A** has **20** questions and section **B** has **12** questions. The paper has **10** printed pages.
2. Answer **all** questions. **All** answers to both sections A and B must be shown in the spaces provided.
3. All answers **must** be written using a **blue** or **black** ball point pen or ink. Any answer written in pencils other than on graphs and diagrams will **not** be marked.
4. No calculators or **electronic** pens are allowed in the examination room.
5. Unnecessary **changes** in your work and handwriting that cannot be read easily may lead to **loss of marks**.
6. Do not fill anything in the table indicated: "**FOR EXAMINERS' USE ONLY**" and boxes inside the question paper.

FOR EXAMINER'S USE ONLY

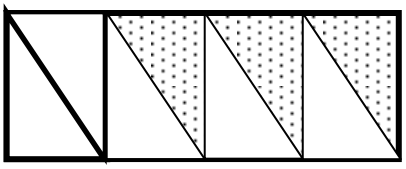
QN. NO.	MARKS	EX'ER'S INITIAL
1 -5		
6 - 10		
11 - 15		
16 - 20		
21 - 23		
24 - 26		
27 - 29		
30 - 32		
TOTAL		

Turn Over

SECTION A(40 MARKS)

1.	Add: 4 0 2 + 1 4 3	2.	Simplify: $^{+}6 - {}^{+}8$
3.	Divide 2727 by 3.	4.	Round off 4783 to the nearest tens.
5.	In a class, the ratio of girls to boys is 5:6. If there are 20 girls, how many pupils are in the class?		
6.	If x and $2x + 30^{0}$ are angles on a straight line. Find the value of x in degrees.		
7.	Kato scored the following marks in a game: 4, 6, 2, 4, 6, 4 and 0. Find his modal mark.		
8.	Workout $\frac{2}{9} + \frac{4}{9}$ to its simplest form.	9.	Write 24 as a product of its prime factors.
10.	In a basket, 4 rotten eggs are mixed with 5 good eggs. If an egg is picked at random from the basket, what is the probability of picking a good egg?		

11. Write down the fraction of the unshaded part of the drawing below.



12. Using a pencil, ruler and protractor, draw an angle of 45^{0}.

13. Kato scored the following marks in a game: 4, 6, 2, 4, 6, 4 and 0. Find his modal mark.

14. Find the sum of the next two numbers in the sequence.
2, 3, 5, 7, ____, _____

15. How many lines of folding symmetry does the figure below have?

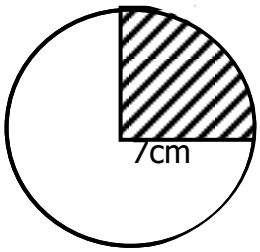
16. Work out (5 x 14) + (5 x 6) using distributive property.

17. Write in figures: Forty five thousand, five.

18. A mathematics test lasting **1** $\frac{1}{2}$ hours ended at 11:00a.m. At what time did the test start?

19. The mean age of 4 girls is 15 years, the total age of three girls is 50 years. Find the age of the fourth girl.

20. Find the area of the shaded part of the circle.



Section B

21. a) Workout: $\frac{0\ l.\ 45 \times 0.66}{1.1 \times 1.5}$

(3marks)

b) $\mathbf{1}\frac{2}{5} \times \mathbf{1}\frac{1}{2} \div \mathbf{3}\frac{1}{2}$

(3marks)

22. a) What is the place value of 3 in the number 4 5 3 0 1?

(1mark)

b) Simplify: $n^{3} \times n^{5} \div (n^{2} \times n^{4})$ (2marks)

c) Expand 4 3 7 using values. (2marks)

23. The sum of interior angles of a regular polygon is 720^{0}.

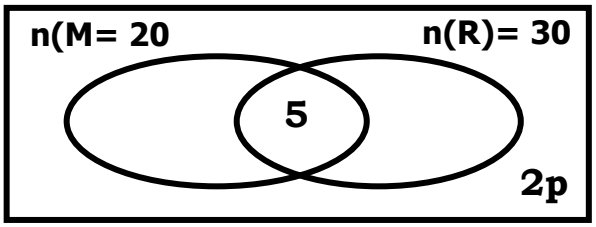
a) How many sides has a polygon? (3marks)

b) What is the size of each exterior angle? (2marks)

24. In a class of 40 pupils, 20 enjoy Matooke (M), 15 enjoy Rice (R), 5 enjoy both Matooke and Rice yet 2p enjoy neither of the two.

a) Complete the Venn diagram below (3marks)

n (∑)= 40



b) Find the value of P. (2marks)

25. The average score of 7, 9, 7, 4 and m is 6.

a) Find the value of M (2marks)

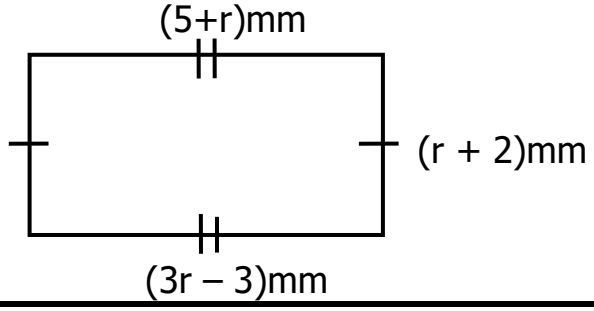
b) What is their Range (1mark)

c) Find the sum of their median and mode. (2marks)

26. Using as pair of compasses, ruler and pencil only, construct triangle KPC where $\overline{KP}$ =6cm, angle KPC = $60^{\mathbf{0}}$, angle CKP = $30^{\mathbf{0}}$ and drop a perpendicular bisector from C to meet KP at n. (5marks)

b)Measure $\overline{cn}$. (1mark)

27. Below is a rectangle. Study it and answer the questions that follow.



a) Find the value of r. (2marks)

b) Calculate its perimeter (3marks)

28. Solve for m:

a) $\frac{3m + 1}{4} = \frac{m+2}{2}$ (3mks)

b) $\frac{1}{5}m^2 = 20$ (2marks)

29. The sum of 3 consecutive odd numbers is 45.

(a) Find the numbers (3marks)

(b) If set x = (all square numbers between 3 and 20) Find n(x) (2marks)

30. Judith went to the supermarket with shs. 45000 and bought the following items.
- 3kg of rice at shs. 2500 per kg
- 2 loaves of bread at shs. 3800 per loaf
- 1 ½ litres of cooking oil at shs. 2000 each litre
- 500 gm of blue band for shs 6000 a kg

a) What was his total expenditure? (5marks)

c) If she was given a discount of shs. 1000, how much was her change? (1mark)

31. a) Express 20m/sec as km/hr. (2marks)

b) A cyclist covered a distance of 60km in 30 minutes. Express his speed in km/hr. (2 marks)

32. Nakato is twice as old as her brother John. If their total age is 42 years.
a)How old is John? (2marks)

b) Find the difference in their ages (1mark)