KOLFRAM EDUCATIONAL SERVICES KAMPALA

PRE NATIONAL MOCK EXAMINATION 2024

SET SIX (BLUE PRINT)

MATHEMATICS

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

Index Number:

Random Number						Personal Number		

Candidate's Name: .....

Candidate's Signature: .....

School ID: .....

District ID: .....

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

Read and follow these instructions carefully:

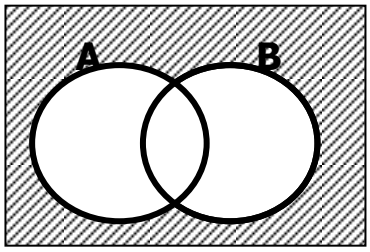
1. This paper has **two** sections: **A** and **B**. Section **A** has **20** questions and section **B** has **12** questions. The paper has **8** printed pages.
2. Answer **all** questions. **All** answers to both sections A and B must be shown in the spaces provided.
3. All answers **must** be written 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.

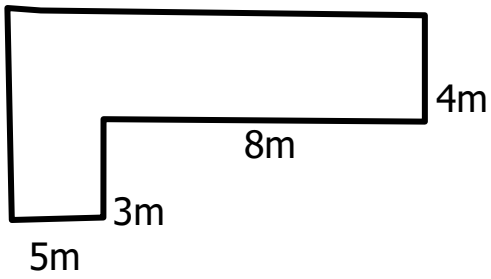
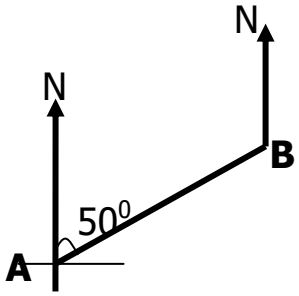
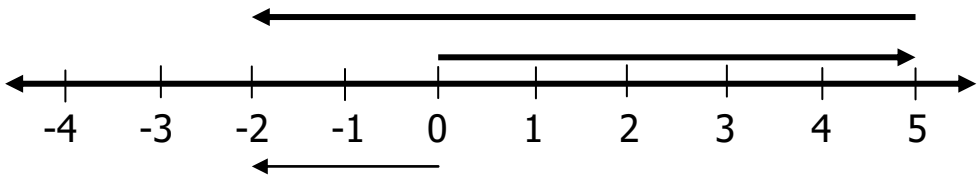
FOR EXAMINER'S USE ONLY

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

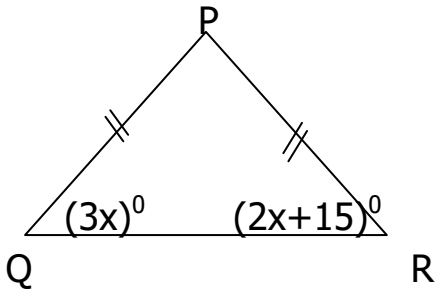
SECTION A: (40 MARKS)

	Work out: 3 4 0 - 4 8 _____	2.	Write 199 in Roman numerals.
3.	Describe the shaded region.  	4.	What is the cost of 250 grams of sugar at 3200 per kg?
5.	The average of 5 numbers is 20. Find the sum of the numbers.	6.	Work out: $\frac{1}{9}$ x $\frac{3}{5}$
7.	A meeting started at 8:30 a.m. and lasted 50 minutes. At what time did it end?	8.	Solve the inequality: $2x + 4 \leq 6$
9.	Using a pair of compasses, a pencil and a ruler only, construct parallel lines 3cm apart.		
10.	What is the square root of $12\frac{1}{4}$?	11.	Decrease 420 books by 30%

12	Work out: $1\ 1\ 0_{two}$ x $1\ 1_{two}$	13	If today is Wednesday, what day of the week will it be 23 days from now?
14	Find perimeter of the figure below.  	15	What number is expanded to give; $(2 \times 10^3) + (7 \times 10^2) + (5 \times 10^1) + (8 \times 10^0)$
16	Find the bearing of A from B.  		
17	How many bottles of water each 0.5 litres can be filled from a water tank of 50 litres?	**18**	Work out: $6p^8 \div p^3$
19	12 technicians can paint a school building in 10 days. How long will 15 technicians take?		
20.	*Write the mathematical statement shown on the number line below.*  		

SECTION B (60 MARKS)

21 **Study the diagram below and answer questions that follow.**



(a) Find the value of x. *(2 marks)*

(b) Find the size of angle QPR in degrees. *(3 marks)*

22a) Simplify: $\frac{0.027 \times 0.16}{0.08 \times 0.9}$ *(3 marks)*

(b) Work out: $1\frac{1}{2} + \frac{3}{4} \div 1\frac{1}{2}$ *(3 marks)*

23. **The table below shows marks scored by different pupils. Study it and answer the questions that follow.**

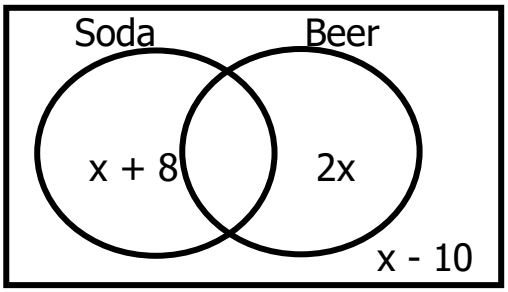
Marks	35	40	50	70	90
No. of pupils	2	3	2	2	1

(a) Find the median mark. *(2 marks)*

(b)	Find the modal mark. *(1 mark)*	(c)	Find the mean mark. *(2 marks)*
24	a) Write 824.57 in expanded form using powers. *(2 marks)*	(b)	Write 2 2 2 2 2 in words. *(1 mark)*
		(c)	What is the place value of 3 in the number 321_{five}? *(1 mark)*
25	At Jinja Bus park, buses travelling to Mbale and Kampala leave after every 40 minutes and 30 minutes respectively. The first buses to the two towns leave together at 10:00 a.m. At what time will buses to the two towns leave Jinja together again? *(5 marks)*		

26 The venn diagram below shows people at a birthday party who like soda or beer or any other drink.

(a) Find the value of x if x – 4 like both types of drinks and 40 people like soda.



(2 marks)

(b) How many people like beer? *(2 marks)*

(c) How many people like soda only? *(1 mark)*

27 a) Using a ruler, a pencil and a pair of compasses only, construct a parallelogram PQRS such that line QR = 7cm, and line PQ = 5cm, angle Q = 60^0. *(4 marks)*

(b) Measure the diagonal QS. *(1 mark)*

28. A farmer sells $\frac{1}{2}$ of the daily milk collection from his farm. He gives $\frac{2}{5}$ of the remaining amount of milk to his parents and remains with 9 litres for his family. How many litres of milk does he collect daily? *(5 marks)*

Okot bought the following items from the market.

3kg of sugar at shs. 3400 per kg.
1 ½ kg of rice at shs. 3600 per kg.
1500 grams of maize flour at shs. 3000.
8 mangoes at shs. 500 each.

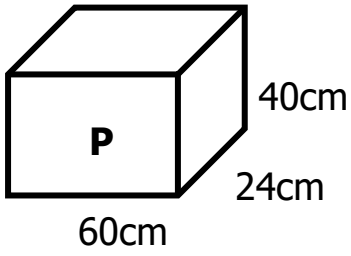
(a) Calculate his total expenditure. *(4 marks)*

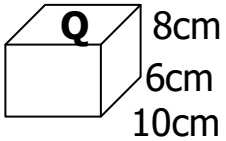
(b) Find his change if he had shs. 30000. *(1 mark)*

30 (a) Solve: $p - 1 = 2p + 5$ *(2 marks)*

(b) Solve for y: $\frac{2y + 2}{3} = \frac{y + 3}{2}$ *(3 marks)*

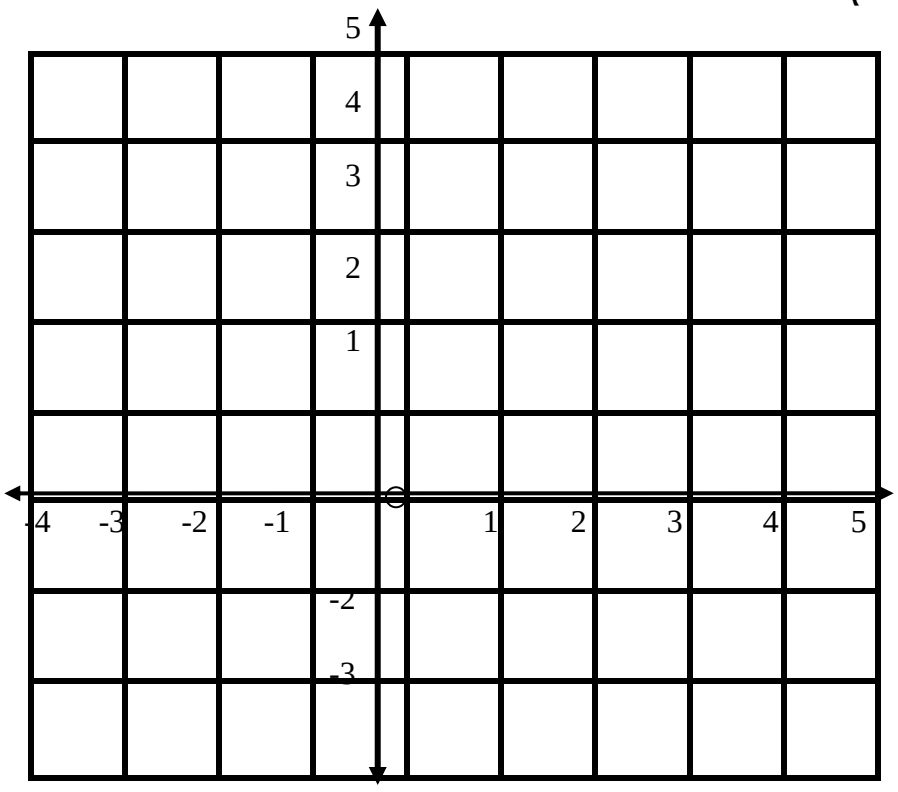
31. Kiyemba filled container **P** below with juice. He served juice to pupils of pre-primary using container **Q** as shown in the diagram.





Find the total number of full containers (Q) of juice he served. *(4 marks)*

32 a) On the graph below, plot the points P(-2, 3), Q(4, 3), R(4, -1),S (-2, -1) *(1 mark each)*



(b) Join P to Q, Q to R, R to S and S to P *(1 mark)*

(c) Draw the diagonals PR and QS. Find coordinates of the intersection of the diagonals. *(1 mark)*