THE NERDS EXAMINATION SERIES

P.7 EXAMINATIONS 2024 (SET 4)

MATHEMATICS

Time allowed: 2hour30minutes

INDEX NO.									

CANDIDATE'S NAME……

CANDIDATE'S SIGNATURE ……DATE ……

SCHOOL'S EMIS NO……..…

DISTRICT NAME ……

READ THE FOLLOWING INSTRUCTIONSCAREFULLY:

1. This paper has two sections A and B

2. All the working in both sections A and B should be shown in the spaces provided

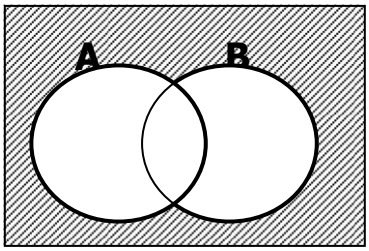
3. All working must be done using blue or black point pen or fountain pen. Diagrams must be drawn in Pencil

4. Unnecessary changes of work may lead to loss of marks

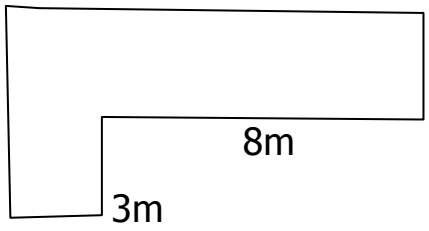
5. Any handwriting that cannot be easily read may lead to loss of marks

6. Do not fill in anything indicated for examiners use only and those inside the paper

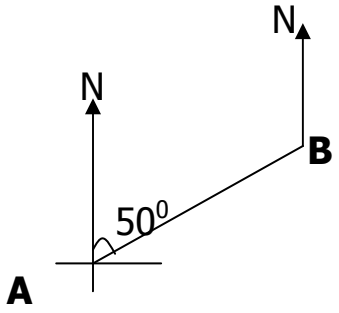
SECTION	**MARKS**
SECTION A	
SECTION B	
TOTAL	

SECTION A: (40 MARKS)			
	Work out: 2 4 0 + 5 8 _____	2.	Write 149 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: $\frac{1}{9} \times \frac{3}{5}$
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 $\frac{1}{4}$ 12?	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.  4m 5m	**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.

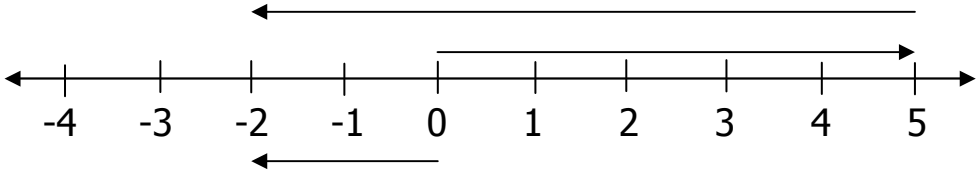


17 How many bottles of water each 0.5 litres can be filled from a water tank of 50 litres?

18 Work out: $6p^8 \div p^3$

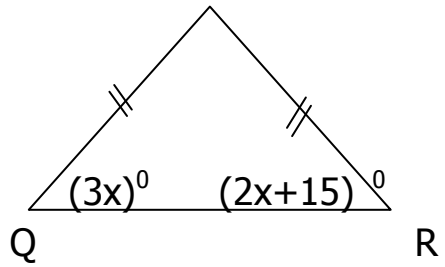
19 12 technicians can paint a school building in 10 days. How long will 15 technicians take?

20. Write the mathematical statement shown on the number line below.



SECTION B

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.**

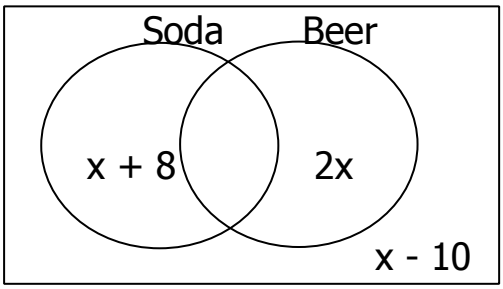
Marks	35	40	50	70	90
No. of pupils	2	3	2	2	1

(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)		

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 sod a. (2 marks)



(b) How many people like beer?

(2 marks)

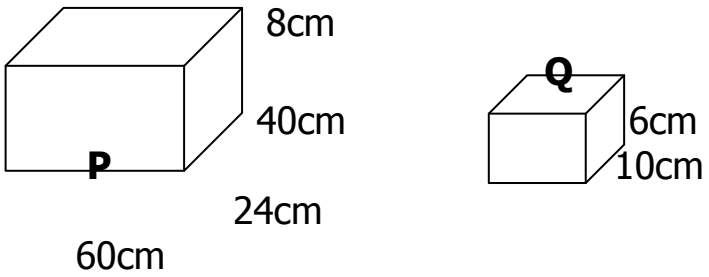
(c) How many people like soda only? (1 mark)

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)

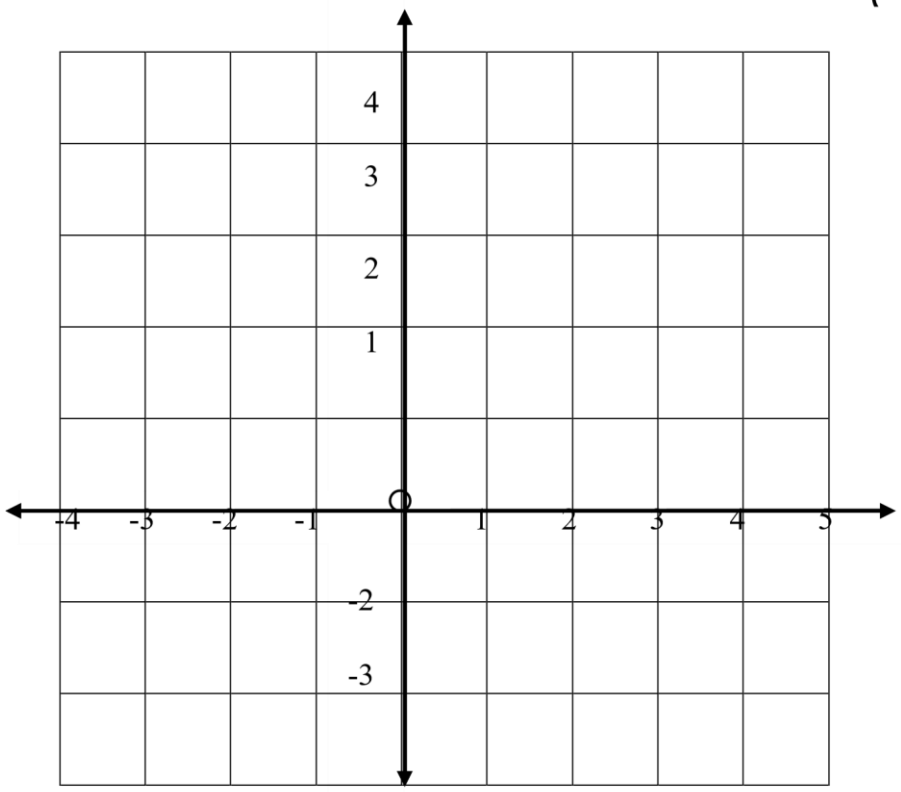
	28. A farmer sells $\frac{1}{2}$ of the daily milk collection from his farm. He gives $\frac{2}{5}$ of the remaining amount of milk to his parents and remains with 9 litres for his family. How many litres of milk does he collect daily? (5 marks)
	Okot bought the following items from the market. 3kg of 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	Solve: $p - 1 = 2p + 5$ (2 marks)		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)*  5		
	(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)