THE NERDS EXAMINATION SERIES

P.7 EXAMINATIONS 2024 (SET 2)

MATHEMATICS

Time allowed: 2hours 30minutes

INDEX NO.									

CANDIDATE'S NAME ……

CANDIDATE'S SIGNATURE ……DATE …….

SCHOOL'S EMIS NO……..……

DISTRICT NAME …….

READ THE FOLLOWING INSTRUCTIONS CAREFULLY:

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)

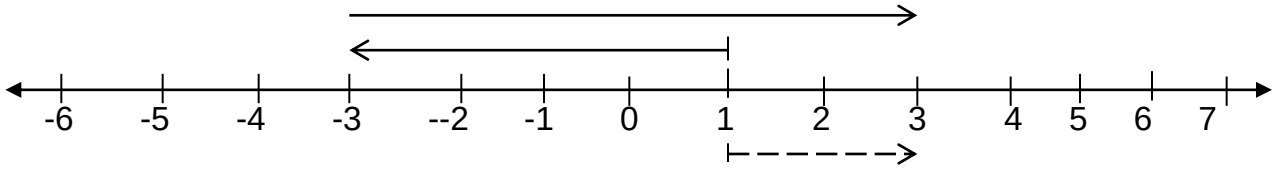
1. Arrange in ascending order.

   (-5, 2, 0, -3, 4, -4, ‘1).

2. Write 440000 in standard form.

3. How many minutes are in $1\frac{1}{3}$ hours?

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

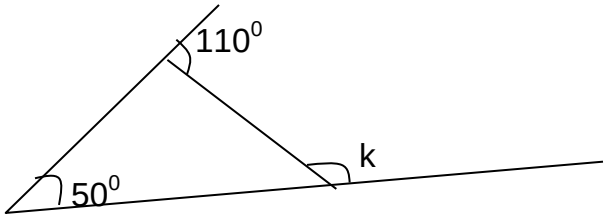


5. Find the next two numbers in the sequence.

   60, 56, 52, 48, ____, _____

6. Given that this cup  can hold 1.5 litres, how many such cups do we need to collect 9 litres?

7. In the figure below, find the size of the angle marked k.



8. Work out: $(2.4 \times 10^3) + (2.6 \times 10^3)$ using distributive property.

9. What is ⅔ of the complement of 60°.

10. Uganda currency sh. 2900 can buy 1US dollar. How many US dollars can one get from Ug. Sh. 870000?

11. What percentage of the figure is not shaded?

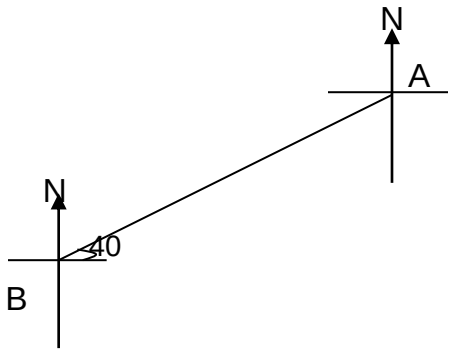
12. Simplify: 6pq - 3ab - 2pq + 8ab

13. Express “a quarter to midnight” in the 24 hour reading.

.14. Work out: $\frac{6}{7} \div 3$

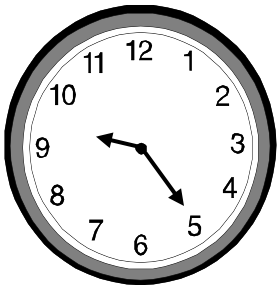
15. A wheel of a bicycle has a diameter of 70cm, how many revolutions will it make to cover a distance of 22000 cm?

16. Find the bearing of point B from point A in the diagram below.



17. The cost of a half kg of rice is sh. 1600. What is the cost of 3kg of rice?

18. What morning time is shown on the clock face below?



19. When two coins are tossed once, What is the probability of two heads showing up?

20. Today is Tuesday. What day of the week was it 30 days ago?

SECTION B: (60 MARKS)

21 The table below shows Kakeeto's shopping list. *(1 mark each)*

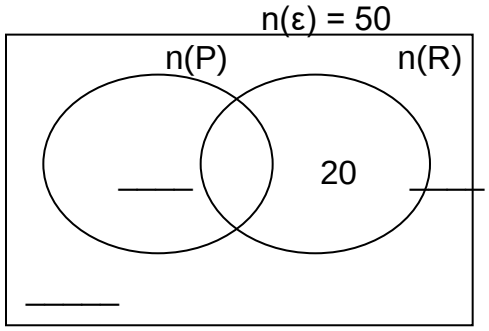
Item	Price	Amount
3kg of sugar	Sh. 3000 per kg	_____
1 ½ litres of cooking oil	Sh. _____ per litre	12000
2 ½ litres of milk	sh. 2000 per litre	sh. _____
	Total expenditure	**Sh.** _____

(a) Complete the shopping bill.

(b) If he paid sh. 19500 for all the items, what percentage discount was he offered? *(2 marks)*

22. In a class of 50 pupils, 11 pupils like posho (P) only, 2y pupils like rice (R) only, while 20 pupils like both posho and rice. 9 pupils do not like any of the foods.

(a) Show the information on the Venn diagram below. *(1 mark each)*



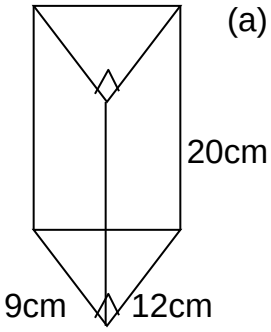
(b) How many pupils like rice? *(3 marks)*

23(a) Work out: $\frac{0.24 + 0.6}{1.2 \times 0.01}$ *(2 marks)*

(b) Draw beads to show the number 3401. *(1 mark)*

(c) Simplify: $1\frac{2}{5} \times 1\frac{1}{2} \div 3\frac{1}{2}$ *(2 marks)*

24. The diagram shows a triangle prism.



(a) Find its volume. *(2 marks)*

(b) Work out its surface area. *(3 marks)*

25 The median of the three consecutive odd numbers is x. If the sum of the number is 39,

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

(b) Find the mean of the smallest and the largest numbers. *(3 marks)*

26. Amos gave away $\frac{2}{3}$ of his land to his son, $\frac{1}{4}$ of the remainder to his daughter and the remaining part to his wife. If Amos had 18000 square metres, how much land did each one get? *(6 marks)*

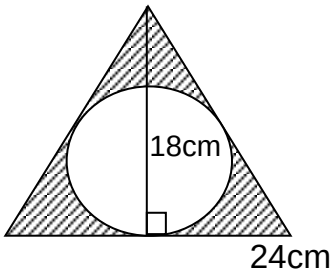
27a) Using a ruler, a pencil and a pair of compasses only, construct a triangle ABC in which AB = 6cm, angle ABC = 120^0 and angle BAC = 30^0. Drop a perpendicular line from C to meet AB at K. *(4 marks)*

(b) Measure CK *(1 mark)*

(c) Calculate the area of ABC. *(1 mark)*

28. Kato drove for 3 hours 45 minutes from Kampala to Kinoni at an average speed of 64km/hr. How long did he take on the return journey if he drove at a constant speed of 80km/hr. *(4 marks)*

29. The area of the shaded part is 62cm^2. Find radius of the circle. *(4 marks)*



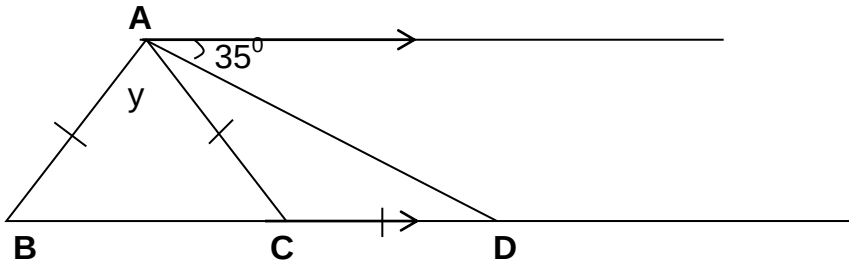
30(a) Solve:

(i) $\frac{2}{5}(K - 5) = 2$ *(2 marks)*

(ii) $4y^2 - 5 = 59$ *(2 marks)*

(b) Subtract: 12x from ^-8x *(1 mark)*

31. In the figure AB = AC = CD. Find the value of angle y in degrees. *(4 marks)*



32 (a) Given that y = 3x - 5. Complete the table below. *(1 mark each)*

X	4	_____	$\frac{1}{3}$	_____	3
Y	_____	-2	_____	-8	4