LUWEERO DIOCESE JOINT MOCK 2023

MATHEMATICS

Time Allowed: 2 HOURS: 30 MINUTES

Emis No.					Personal No.		

=Candidate's Name: .....

Candidate's Signature: .....

School: .....

District: .....

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

Read the following instructions carefully:

1. The paper has 2 sections: **A** and **B**. Section **A** has **20** questions (40 marks) and section **B** has **12** questions (60 marks).
2. All the working for both sections **A** and **B** must be shown in the spaces provided.
3. All working must be done using a blue or black ball point pen or a fountain pen. Any work in pencil other than graphs, pictures and diagrams will not be marked.
4. **No calculators** are allowed in the examination room.
5. Un ncessary changes of work may lead to loss of marks.
6. Any handwriting that cannot easily be read may lead to loss of marks.
7. Do not fill anything in the boxes indicated **"For examiners' use only"** and those inside the questions paper.

FOR EXERMINER'S USE ONLY		
QN. No.	MARK	SIGN
1 - 5		
6 - 10		
11 - 15		
16 - 20		
21 - 22		
23- 24		
25 - 26		
27 - 28		
29 - 30		
31 - 32		
TOTAL		

SECTION A: (40 Marks)

1. Workout: 6 x 3

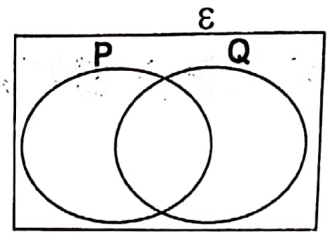
2. List down all factors of 40.

3. Simplify using L.C.M.

$$\frac{2}{3} \div \frac{1}{4}$$

4. Today is Friday, what day of the week will it be after 86 days?

5. In the venn diagram below, shad $(P \cap Q)'$



6. Express LXXXIII in Hindu Arabic numerals.

7. Using a protractor, pencil and a ruler only, draw an angle of 75°.

8. Change 780m to km.

9. Given that  represents 12 cups and  represents 13 pots at school. How many items are represented by  and  ?

10. Moses withdrew 5000 shillings notes which amounted to sh. 870,000. If the last note was of serial number AP004300, find the first note serial number.

11. Write 21,012 in words.

12. Joseph and Peter shared a certain sum of money in the ratio of 5:3 respectively. If Joseph got sh. 2500 more than Peter, how much money did they share altogether?

13. Workout:

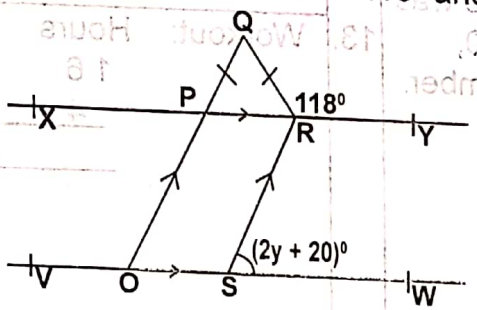
Hours	Minutes
16	20
− 4	34

14. Solve for x: $\frac{x}{4} + 6 = 14$

15. Given that A = {m , p , r , y , z} and B = {x , f , p , q , i , y , g}.
Find $n(A \cap B)'$

16. Workout: $2^0 + (2^3 \times 2^{-2})$

17. Study the figure below and answer the questions that follow. Given that OQ is parallel to SR, angle QRY = 118^0 and RSW = $(2y + 20)^0$.



Find the value of y.

18. Find the mean of 3y, (y + 2), y and 3y + 10.

19. The distance around a circular flower garden is 8.8cm. Calculate its area.

20. A father is five times as old as his son. The difference in their ages is 52. How old is the father?

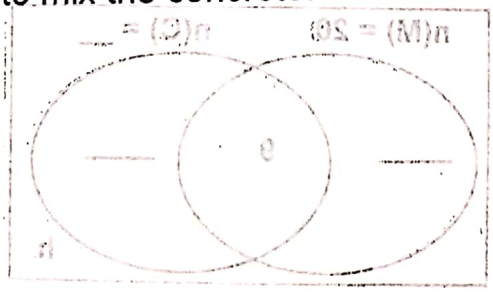
SECTION B: (60 Marks)

21. a) Workout 607 – 42 using abacus. (2 mks)

b) Express 48,349 in expanded form using exponents. (2 mks)

22. Alex mixed the concrete made up of $\frac{2}{3}$ cement and $\frac{1}{6}$ sand and the rest gravel. If there are 6kg of gravel less than cement,

a) Find the fraction of gravel used to mix the concrete.



b) How many kilograms are mixed to make the concrete altogether? (2 mks)

23. An aeroplane left airport A on a bearing of 275^0 for port C a distance of 600km. It then left airport C for air port D on a bearing of 240^0 a distance of 500km.

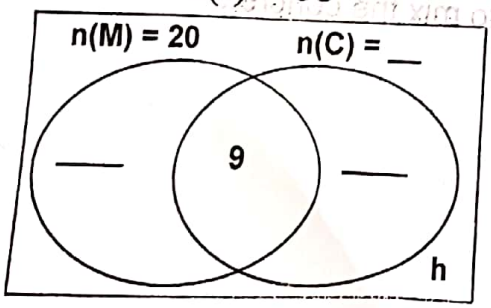
a) Using a scale of 1cm to represent 100km, draw an accurate diagram to show the flight of the plane. (4 mks)

b) Find the shortest distance between air port A and D in km. (1 mk)

24. In a family of 33 members all like fish, 20 like fish and meat , 5 like chicken and fish only, 9 all the three. Some members like fish only.

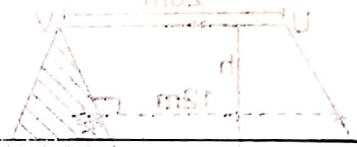
a) Represent the information on the Venn diagram below. (3 mks)

$n(\varepsilon) = 33$



b) Find the value of h (2 mks)

c) How many members like fish and meat only? (1 mk)



25. Lillian arrived at the park 10 minutes before the normal departure time for a bus to Lira. If the bus departed 35 minutes later, find how long she waited for the bus to depart at the bus park using a number line.

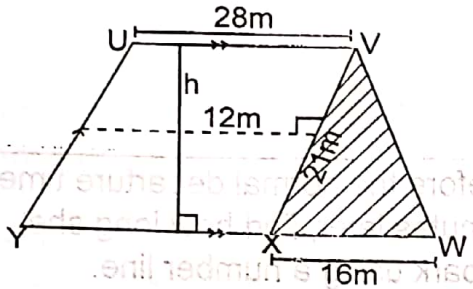
(3 mks)

b) Subtract $^{-}5$ from $^{-}6$ (2 mks)

26. a) Solve for p: $5^{2p+1} \div 5^{3} = 25$ (3 mks)

b) Simplify using reciprical: $2^2 \div 2^{-3}$ (2 mks)

27. Study the figure below and answer the questions that follow.



a) Work out the area of the shaded part. (4 mks)

b) Calculate the area of the whole figure UVWXY. (2 mks)

28. Madam Abbo went shopping for X-mas as shown in the table below.

a) Complete the table below. (5 mks)

ITEM	QUANTITY	UNIT COST	TOTAL COST
Loaves of bread	$\frac{1}{2}$ a loaf	_____	sh. 1800
Meat	_____kg	sh. 14,000	sh. 21;000
Salt	$1\frac{1}{3}$kg	sh. 900	sh. _____
Bars of soap	4 bars	_____	_____
TOTAL			sh. 52,000

b) If she had sh. 8000 as change, how much did she have at first? (1 mk)

29. a) Using a pair of compasses, pencil and a ruler only, construct triangle PQR where PQ = 7cm, angle QPR = 90^0 and angle PQR = 45^0. (4 mks)

b) Meausre QR. (1 mk)

30. a) Show that 585 is completely divisible by 7 without dividing. (2 mks)

b) Study the magic square below and find the unknown. (4 mks)

15	x	13
10	12	y
11	p	q

31. The table show s the marks obtained by some students in a test. Use the information to answer questions that follow.

Marks	60	70	50	80
Number of students	3	2	y – 2	1

a) How many pupils did the test, given that their average score was 60? (4 mks)

32. A car left town X at 7:40a.m moving at speed of 80km/hr and reached town Y at 10:10a.m. It stayed at town Y for 20 minutes and continued to town Z and covered a distance of 180km at a speed of 72km/hr.

a) Find the distance between X and Y. (2 mks)

b) At what time did the car reach town Z? (2 mks)

END