GREENHILL SCHOOLS

JOINT EXAMINATIONS (SET VII) 2023

SUBJECT : MATHEMATICS

DURATION: 2 HOURS 30 MINUTES

Index No.	EMIS No.						Personal No.		

Candidates Name ……..

Candidates' Signature ……..

EMIS No. ……

District Name ……

Read the following instructions carefully.

1. This paper has **two** Sections: **A** and **B**.
2. Section **A** has 20 answer questions (40 marks)
3. Section **B** has 12 questions (60 marks)
4. Answer **ALL** questions. Answers to both sections must be written in the spaces provided.
5. All answers must be written using a blue or black ballpoint pen or ink. Diagrams should be drawn in pencil.
6. Unnecessary alteration of work may lead to loss of marks.
7. Any handwriting that cannot be easily read may lead to loss of marks.
8. Do not fill anything in the box indicated for examiner's use only.

FOR EXAMINERS USE ONLY		
QN. NO.	**MARK**	**SIGN**
1 - 10		
11 - 20		
21 - 22		
23 – 24		
25 – 26		
27 – 28		
29 – 30		
31 – 32		
TOTAL		

SECTION A: 40 MARKS

Answer all questions in this section

Questions 1 to 20 carry two marks each

1. Work out: 23×3

2. Write in figures: Ninety thousand, forty.

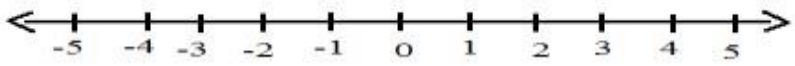
3. Simplify: $4y - 3(y - 1)$

4. Given that Q = {the last 3 letters of the English alphabet}.
   List all the proper subsets in Q.

5. Subtract: 113_{five} from 432_{five}

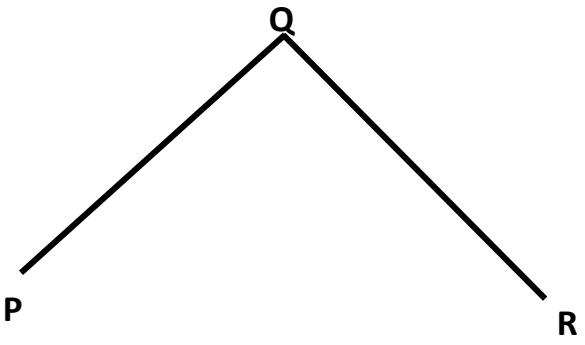
6. Express 4.5 metres as centimetres.

7. Work out: $^{-}5 + {}^{-}2$ on the number line below



8. Work out: 55.5 **–**2.03 **+** 0.05

9. Use a protractor to measure the size of angle PQR below.

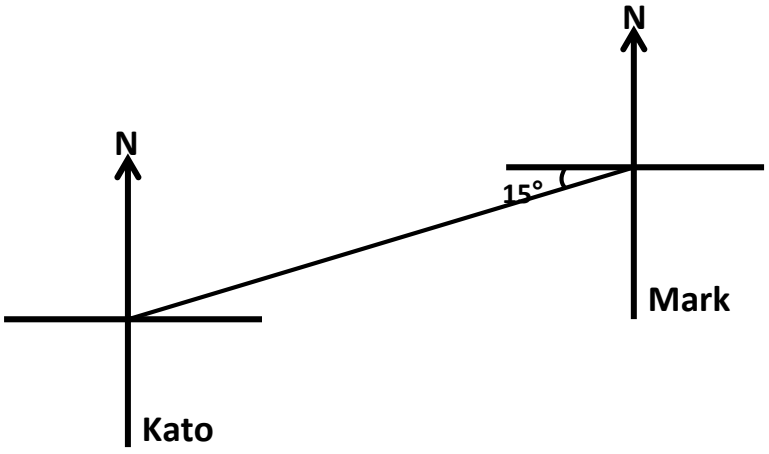


10. The mean of 2.5, 0.3, k+1.9 and 0.6 is 1.7 . Find the value of k.

11. Solve for n: $\frac{6n}{5} = n + 3$

12. The diagram below shows the position of Kato and Mark.

Use it to answer the question that follows



Work out the bearing of Mark from Kato.

13. Find the Highest Common Divisor(HCD) of 24 and 36.

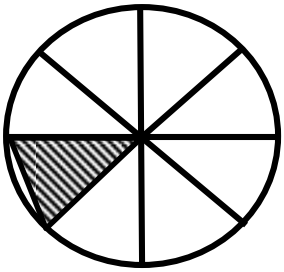
14. In a market, one buys 3 water mellons at sh.12,000.
How many similar water mellons does one buy with sh.28,000?

15. The table below shows the temperature of juice in a fridge recorded at different times of the day.

Temperature	-7°c	-5°c	2°c	3°c	-1°c
Time of the day	12:00midnight	2:00a.m	12:30p.m	1:00pm	7:00pm

Calculate the range in temperature which was recorded during the morning hours.

16. The diagram below shows the part of the cake which was given to Jane.



Express the part she got as a percentage of the whole cake.

17. Mungriek bought 5 crates of soda with 24 bottles each.
How many litres of soda did she buy if each bottle had 30 ml?

18. Dannah bought $3\frac{1}{2}$ kg of lato milk in small sackets of 250g each.
If each sacket was for sh.5,000, how much money did she pay for all the sackets?

19. Jollyn went to the bed at “twenty minutes to one in the morning”. Express the time she went to the bed in the military time.

20. A taxi uses 9 litres of fuel to cover 27 kilometres .What distance will the same taxi go if it was filled with 15 litres of fuel?

SECTION B: 60 MARKS

*Answer **all** the questions in this section*
Marks for each question are in the brackets

21. The table below shows the marks scored by different pupils in an Examination. Use it to answer the questions that follow.

Mark	**Tally**	**Total mark**
40	||||	160
_____	𝍸	150
75	____	_____
60	||	_____
		730

Complete the table above.(Show your working) ***(4marks)***

22. The time table below shows the departure time and arrival time of the Link bus from Kampala to Iganga. Study and use it to answer the questions that follow.

Towns	**Arrival time**	**Departure time**
Kampala		8:00a.m
Mukono	8:50a.m	9:10a.m
Jinja	10:20a.m	10:30a.m
Iganga	1:15p.m	

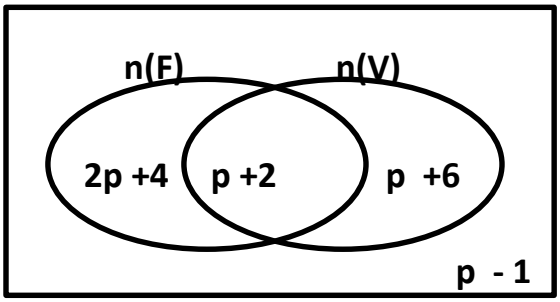
a) For how long did the bus take to travel from Mukono to Jinja?

(1mark)

b) Calculate the total time the bus took while waiting for the passengers.
(1mark)

c)If the distance from Kampala to Iganga is 630km, calculate the average speed for the whole journey. ***(3marks)***

23. On a sports day, players played football(F) and volleyball(V) as shown in the Venn diagram below. Study and use the Venn diagram to answer the questions that follow.



a) If 18 players did not play volleyball, how many players played volleyball only? ***(3marks)***

b) Find the probability that a player picked at random to be the best player was a footballer. ***(2marks)***

24. Kasozi set two different alarms in his watch which were ringing in the ratio of 3:4 respectively. Their Greatest Common interval was 10 minutes.
If they last rung together at 11:30a.m.
At what time will they ring together again? ***(5marks)***

25. a)Study and complete Mikiibi's shopping table below. ***(5marks)***

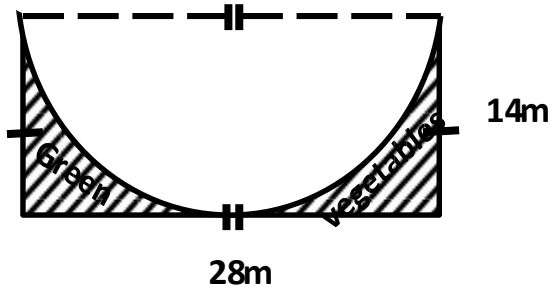
Item	**Quantity**	**Unit cost**	**Total cost**
Meat	$1\frac{1}{2}$ kg	Sh.14,000	Sh…….
Rice	$2\frac{1}{2}$ kg	Sh…….	Sh.10,000
Sugar	……kg	Sh.3,000	Sh.6,750
Cooking oil	3 litres	Sh…….	Sh…….
	Total Expenditure		**Sh.64,750**

b) If he was given a discount of 20%, how much money did he pay?
(1mark)

26. The interior angle of a regular polygon is thrice its exterior angle. Calculate the interior angle sum of the polygon. ***(4marks)***

27. The diagram below shows how Mr.Ssenkala used part of his compound.

Find the area covered by the green vegetables (shaded)*(5marks)*



28. A milk container was $\frac{3}{4}$ full of milk. When 12.5 litres of milk were added, the container became $\frac{4}{5}$ full of milk.
How many litres of milk are in the container now? ***(4marks)***

29. Using a ruler and a pair of compasses only,
a)Construct a parallelogram KLMN where line KL =6cm, angle LKN=120° and line LM =4.6cm. ***(4marks)***

b)Drop a perpendicular from point M to meet line KL at T.
Find the area of the parallelogram. ***(2marks)***

30. During the general registration sim update, MTN registered 25% of the customers, Airtel registered 50% of the remaining customers and Lyca registered rest of the customers.
a)What fraction did Lyca register? ***(2marks)***

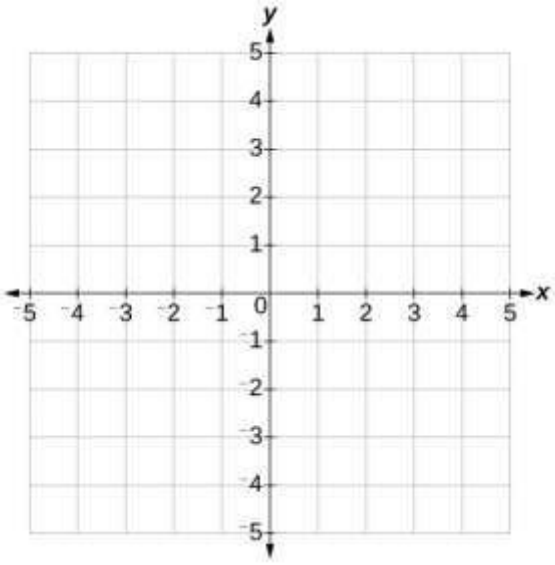
b)If all the Telecom companies registered 32,000,000 customers.
Calculate the number of customers registered by each Telecom company.

(3marks)

31. a) Solve the inequality: $5 - X > 2$ ***(2marks)***

b)Max is 5 years old. Daniel is 25 years old.
After how many years will Daniel's age be thrice as old as Max?
(3marks)

32. a)On the grid below, plot the points A(2, $^{-}$4), B(2, 4), C($^{-}$2, 4) and D($^{-}$2, 0).
(4marks)



b) Join A to B, B to C, C to D and D to A . *(1mark)*

c)Find the area of the figure formed after joining all the points.
(1 box represents 1cm) ***(1mark)***

END