RUBANDA SOLIDARITY PRIMARY SCHOOL

PRIMARY SEVEN MOCK EXAMINATION ACADEMIC PANNEL

MATHEMATICS EXAM 2023

Time:2 hours 30 minutes

Name……

School……...

Class……

District……

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

Read the following instructions carefully.

1. This paper is made up two sections A and B.
2. Section A has twenty (20) questions (40 marks)
3. Section B has twelve (12) questions (60 marks)
4. Answer all questions in both sections A and B
5. All answers in both sections must be written in the space provided.
6. Use blue or black ball point pen and ink, all drawings must be done using a pencil.
7. Unnecessary crossing of answers leads to loss of marks.
8. Any handwriting which cannot be easily read, may lead to loss of marks.
9. Moving in and out of the classroom during examination, is a sign of examination malpractice.
10. Do not share your work with your friend or else one.

QUIZ	MARKS	INITIALS
1-10		
11-20		
21-24		
25-28		
29-32		
TOTAL		

TUBIHERUHANGA AMBROZIO

SECTION A: 40 MARKS

*Answer **all** the questions in this section*

*Questions **1** to **20** carry two marks each*

1. Work out: 33×3.

2. Write 13,442 in words.

.....

.....

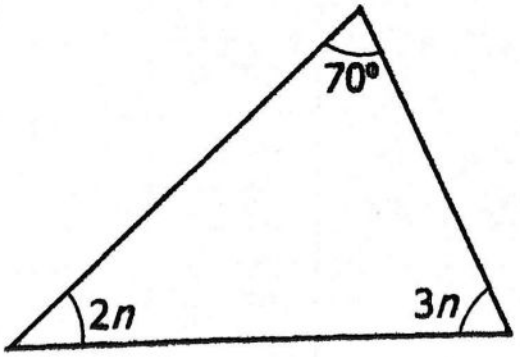
3. Given that $M = \{a, b, c, d, e\}$,

$N = \{a, e, i, o, u\}$.

Find $n(M \cup N)$.

4. Convert 12_{five} to base ten.

5. Use the figure below to calculate the value of n.



6. Solve: $3g + 6 = 18$

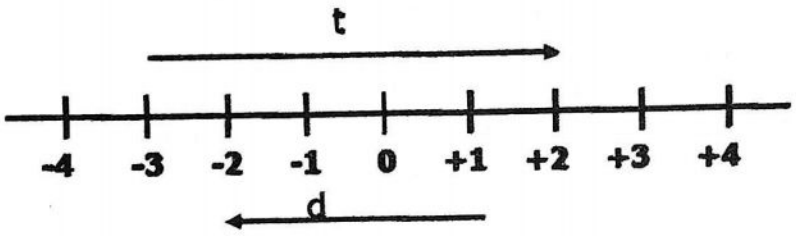
7. Work out: $\frac{7}{8} \div 2\frac{1}{4}$

8. A fifty-minute lesson ended at 11:00 am. At what time did it start?

9. The ratio of boys to girls in a class is **2:3** respectively. If there are 30 boys in class, how many girls are in class?

10. Find the distance covered by a wheel of diameter 2.8 metres in $2\frac{1}{2}$ revolutions.

11. Using a number line below, write the integers of t and d.

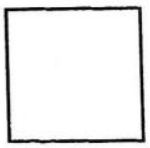


12. Given that $m = (6 \times 10^4) + (7 \times 10^3) + (4 \times 10^0)$, find the value of m.

13. Solve for m. $6^{4m} \div 6^m = 6^9$

14. Semanda read a novel from page 11 to 52 consecutively. How many pages did he read?

15. The circumference of a circular garden is 22 m. Find its area. (Use $\pi = \frac{22}{7}$).

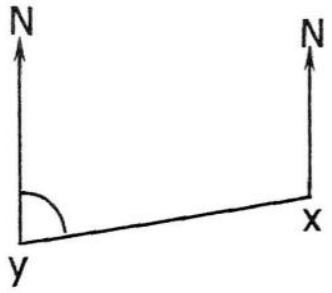


16. If today is Friday, what day of the week was it 135 days ago?

17. In what time will sh. 120,000 yield an interest of sh. 18000 at 5% per year?

Turn Over

18. The bearing of y from x is 250^0. Find the bearing of x from y.



19. If the cost of one dozen of books is sh. 60,000. What is the cost of five similar books?

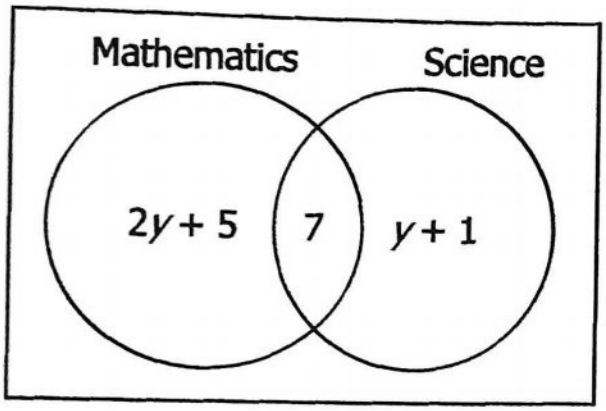
20. Find the median of 18, 26, 19, 16, 20 and 21.

SECTION B: 60 MARKS

*Answer **all** questions in this section*

Marks for each question are indicated in brackets

21. In a school, 27 teachers teach Mathematics (M) only and the rest teach Science (S) as shown in the Venn diagram. Use the information to answer questions.



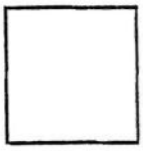
(a) Find the value of y. (*03 marks*)

(b) Find the total number of teachers in school. (*02 marks*)

(c) If a teacher is picked at random, what is the probability that a teacher picked teaches Science only? (*02 marks*)

22. (a) Work out: $\dfrac{0.8 \times 0.4}{0.1 + 0.3}$ (*03 marks*)

(b) Simplify: $\frac{2}{5} \div \frac{3}{10} + \frac{1}{4} - \frac{1}{5}$ (*03 marks*)



23. The mean of 12, 18, 12, 14 and p is 16.

(a) Find the value p. (*03 marks*)

(b) What is the modal number? (*01 mark*)

24. Study and complete the table below. *(05 marks)*

Item	Quantity	Unit cost	Amount
Meat	3 kg	Sh. 130000	.....
Sugar	..... kg	Sh. 5000 per kg	Sh. 2500
Cooking oil	250 ml	Sh. 4000 per liter	.....
Salt	2 sackets	Sh. ..... per sacket	Sh. 2400.
Total expenditure			

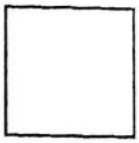
25. Sarah was given pocket money, $\frac{1}{3}$ of it was spent on books, $\frac{2}{5}$ of the remaining money on pens and the rest on the school canteen.

(a) If she put sh. 6000 in the school canteen, how much pocket money was Sarah given? *(05 marks)*

(b) What percentage did Sarah spend on books? *(01 mark)*

26. (a) Solve: $\frac{1}{2}(4m - 2) = m + 2$ *(03 marks)*

(b) If a = 2, b = 4, c = 1, evaluate: $\frac{5b}{2a} - c^3$. (*02 marks*)



27. (a) Work out: $1011_{\text{two}} + 110_{\text{two}}$. (*02 marks*)

(b) Write 0.00382 in standard form. (*02 marks*)

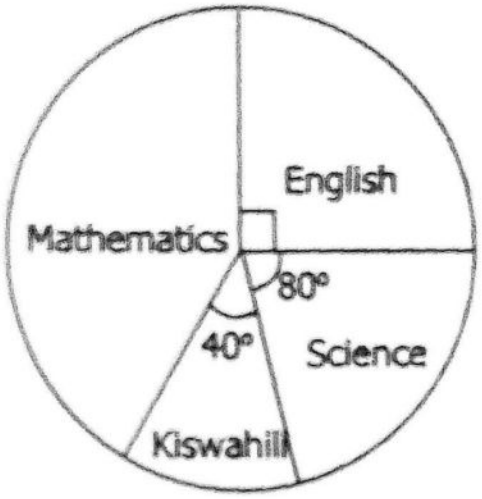
28. Given that $x = y + 1$, complete that table below: *(04 marks)*

x	0	.....	.....	4	-2
y	-1	1	-1	.....	-3

29. (a) Using a ruler, pencil and pair of compasses only, construct a triangle ABC such that BAC = 45°, ABC = 60° and AB = 6 cm. *(04 marks)*

(b) Measure AC. _____ *(01 mark)*

30. The pie chart below shows the subjects chosen by pupils of Kigumba Primary School. Use it to answer questions that follow.



(a) Find the angle sector for Mathematics. (*02 marks*)

(b) If 300 pupils like Mathematics, how many pupils are in Kigumba Primary school? (*03 marks*)

31. The sum of three consecutive even numbers is 72.

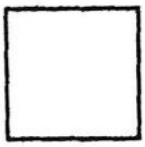
(a) What are the numbers? (*03 marks*)

(b) What is the difference between the last number and first number? (*02 marks*)

32. Peter left his home at 7:30 am riding a bicycle and arrived at his place of work 27 km a way at 10:30 am.

(a) Find his average speed. (*02 marks*)

(b) Express Peter's speed in meters per second. (*03 marks*)



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