HOIMA DIOCESE EXAMINATIONS BOARD

PRIMARY SEVEN MOCK EXAMINATION
2023
MATHEMATICS

Time Allowed: 2 hours 30 minutes

Index No.

Candidate's Name: .....

Candidate's Signature: .....

School Name: .....

District: .....

Reading the following instructions carefully:

1. This paper has two sections: **A** and **B**. Section **A** has **20** questions and section **B** has **12** questions. This paper has **15 printed pages.**
2. Answer **all** questions. **All** the working for both sections **A** and **B** must be shown in the space provided.
3. **All** working **must** be done using a **blue** or **black** ball point pen or ink. Any work done in pencil other than graphs and diagrams will **not** be marked.
4. **No calculators** are allowed in the examination room.
5. Unnecessary **changes** in your work and handwriting that cannot be read may lead to **loss of marks.**
6. Do not fill anything in the boxes indicated **"For Examiners' Use"** only and boxes inside the question paper.

FOR EXAMINERS' USE ONLY		
Qn. No.	**MARKS**	**EXR'S NO.**
1-5		
6-10		
11-15		
16-20		
21-22		
23-24		
25-26		
27-28		
29-30		
31-32		
TOTAL		

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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.

.....

.....

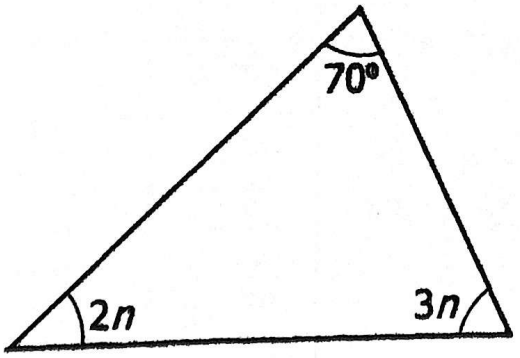
3. Given that $M = \{a, b, c, d, e\}$,

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

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: $3g + 6 = 18$

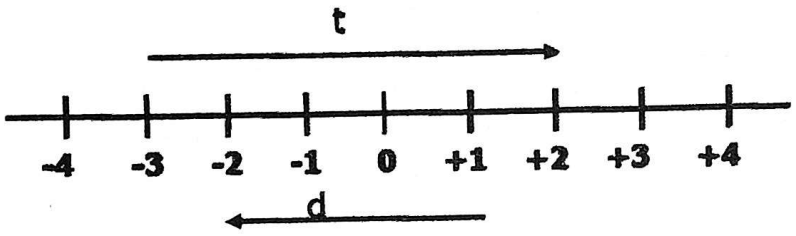
7. Work out: $\frac{7}{8} \div 2\frac{1}{4}$

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.

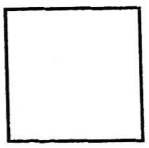


12. Given that $m = (6 \times 10^4) + (7 \times 10^3) + (4 \times 10^0)$, find the value of m.

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 $\pi = \frac{22}{7}$).

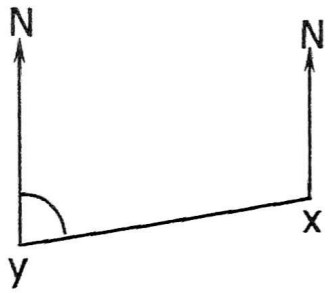


16. If today is Friday, what day of the week was it 135 days ago?

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?

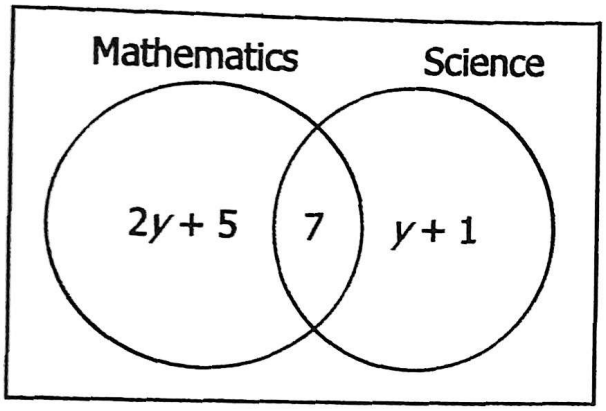
20. Find the median of 18, 26, 19, 16, 20 and 21.

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.



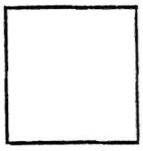
(a) Find the value of y. (*03 marks*)

(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			

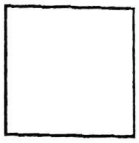
25. Sarah was given pocket money, $\frac{1}{3}$ of it was spent on books, $\frac{2}{5}$ of the remaining money on pens and the rest on the school canteen.

(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*)

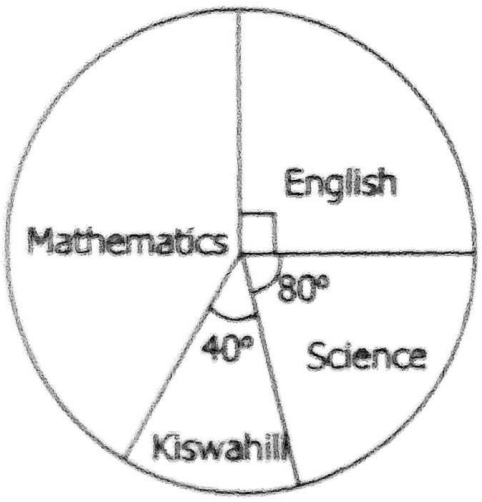
28. Given that $x = y + 1$, complete that table below: *(04 marks)*

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.

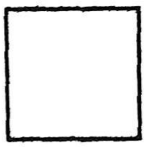
(a) What are the numbers? (*03 marks*)

(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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