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.

Turn Over

1.   Work out: 33 × 3.

2.   Write 13,442 in words.

    ....

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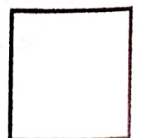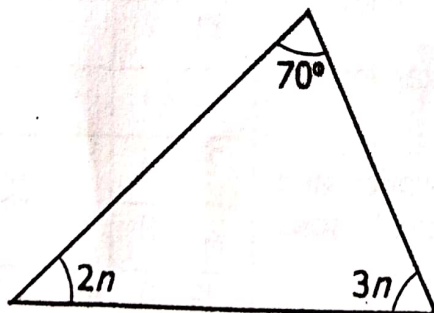
3.   Given that $M = \{a, b, c, d, e\}$,

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

      Find $n(M \cup N)$.

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

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

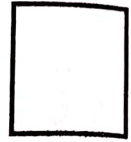**6.** Solve: $3g + 6 = 18$

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

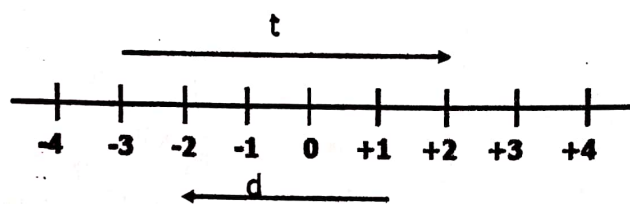**8.** A fifty-minute lesson ended at 11:00 am. At what time did it start?

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?

Turn Over

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

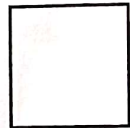**11.** Using a number line below, write the integers of t and d.

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?

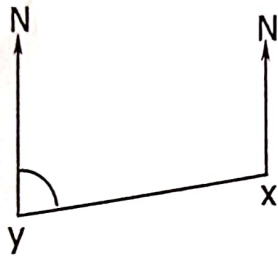15. The circumference of a circular garden is 22 m. Find its area. (Use $\pi = \frac{22}{7}$).

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?

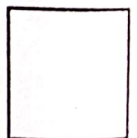**Turn Over**

18. The bearing of y from x is 250⁰. Find the bearing of x from y.

```
N              N
↑              ↑
|              |
|              |
|_____ |
          ⌒    X
y
```

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

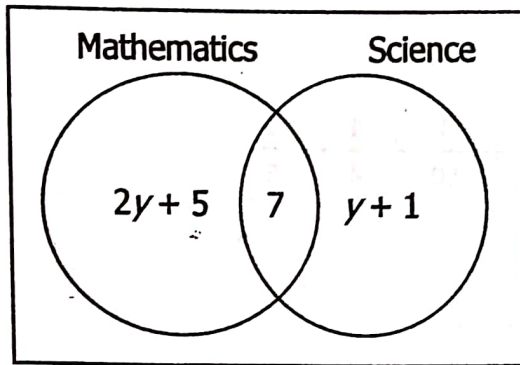**20.** Find the median of 18, 26, 19, 16, 20 and 21.

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)*
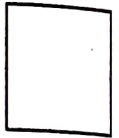
7 **Turn Over**

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

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

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

(a) Find the value p.   *(03 marks)*
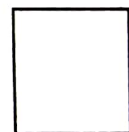
(b) What is the modal number?   *(01 mark)*

8

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*)

10

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

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

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

Turn Over

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

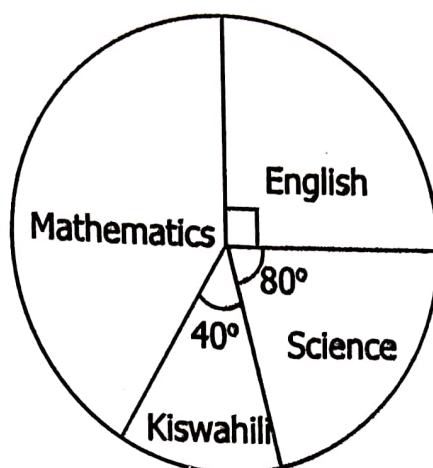| x	0	....	....	4	-2
y	-1	1	-1	....	-3

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*)

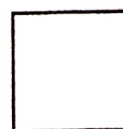(b) Measure AC.   _____   (*01 mark*)

12

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*)

Turn Over

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*)

14

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

(03 marks)

END