DIVINE EDUCATION CENTRE

PRE-MOCK EXAMINATION

2025

MATHEMATICS SET 2

O

Time allowed: 2hours 30 minutes

Random No.						Personal No.		

Candidate's Name: .....

Candidate's Signature: .....

District ID No.

Read the following instructions carefully:

1. Do not write your **school** or **district name** anywhere on this paper.
2. This paper has two sections: **A** and **B**. Section **A** has **20 questions** and **section B** has **12 questions**. This paper has **12 pages** printed altogether.
3. Answer **all** questions. All the working for both sections **A** and **B** must be shown in the spaces provided.
4. **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.
5. **No calculators** are allowed in the examination room.
6. Unnecessary **changes** in your work and handwriting that cannot be easily read may lead to **loss of marks.**
7. Do not fill anything in the table indicated **"For Examiners' use only"** and the 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		

Turn Over

SECTION A (40 MARKS)

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

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

1. Workout: 451 + 27

2. Write 4099 in words

   .....

   .....

3. Given that M = {all factors of 9}. Find n(M)

4. Simplify: 3a – 2p + a – 3p

5. Convert $7m^3$ to cubic centimetres.

6. Solve for k; 2(k – 3) = 4

7. Given that  represents 12 eggs. How many pictures will represent 54 eggs?

8. Find the next number in the sequence;

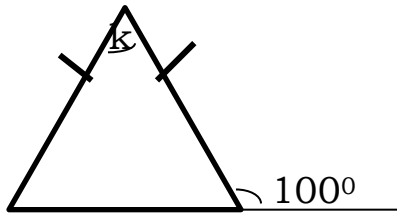
   1, 8, 27, 64, _____

9. Using a pair of compasses and a ruler, construct an angle of 300^0 in the space provided below.

10. Workout: $\frac{2}{5} \div 1\frac{1}{3}$

11. A trader bought an item and later sold it at a loss of 10% .If the trader sold the item at sh. 45,000. How much did the trader buy the item?

12. Find the value of k in the figure below.



13. A mathematics examination that ended at 12:20 p.m took 2 ½ hours. At what time did the examination start?

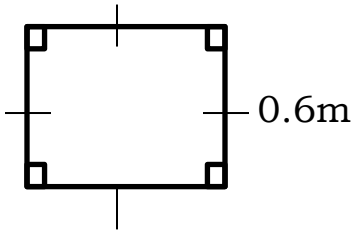
14. The gross weight of a gas cylinder is 30.0 kg. If the empty cylinder weighs 15.8 kg .Calculate the net weight of the gas in the cylinder.

15. Find the maximum number of pupils that can share 24 pens or 30 pens exactly and leaves no remainder in each case.

16. The mean of 3y+2, 11, 4y +3 and 5y is 10. Find the value of y.

17. What number has been expressed in standard form to get 2.05×10^{-2}?

18. Find the area of the figure below.

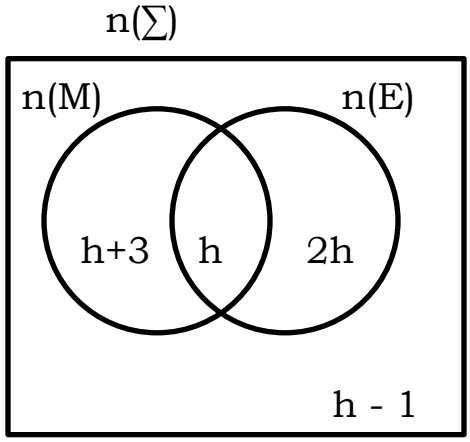


19. A car moved a distance of 120km in 150minutes. Calculate the speed it used in kilometer per hour.

20. Express 3.2727... as a rational number.

SECTION B:60 MARKS

21. The venn diagram below shows the number of pupils who like mathematics (M) and English (E). Use it to answer the questions that follow.



(a) If 12 pupils did not like English, find the value of h. ***(2mks)***

(b) Calculate the probability of selecting a pupil at random who likes English ***(3mks)***

22. A trader bought a tray of 30 eggs at sh.12,000. Three eggs got broken and sold the remaining eggs at a profit of 12 ½ %. How much did the trader sell each egg? ***(5mks)***

23. (a)Change 42_{five} to binary base. ***(3mks)***

(b) Given that $1\ k\ k_{\ five} = 1\ 2\ 1_{six}$. Find the value of k. ***(2mks)***

24. (a)Workout; $\dfrac{7.5 - 4.2}{0.11 \times 0.5}$ ***(3mks)***

(b)Simplify: $\frac{5}{6} \div \left(\frac{3}{4} \text{ of } 3\right)$ ***(2mks)***

25. Mrs. Kasujja went to the market and bought the following items;
- 2kg of maize flour at sh.2400@kg
- 500g of curry powder at sh. 6000 per kg.
- 18 mangoes at sh.5000 for every 6 mangoes.
- 2 bunches of matooke at sh. 30,000.

(a) Calculate her expenditure . ***(4 mks)***

(b) If she was given a discount of 6¼%, how much was the discount? ***(2mks)***

26. A motorist travelled at a speed of 80km/h for 2 hours from Kampala to Mubende. He then continued to Kyenjojo at a speed of 40km/h for 3 hours.

(a) Calculate the distance from Kyenjojo to Kampala. ***(3mks)***

(b) If the taxi moved from Mubende to Kyenjojo in only 2 hours, what speed did the taxi use to cover that journey? ***(2mks)***

27. The table below shows the marks scored by some pupils in a P.7 class in mathematics test. Use it to answer the questions that follow.

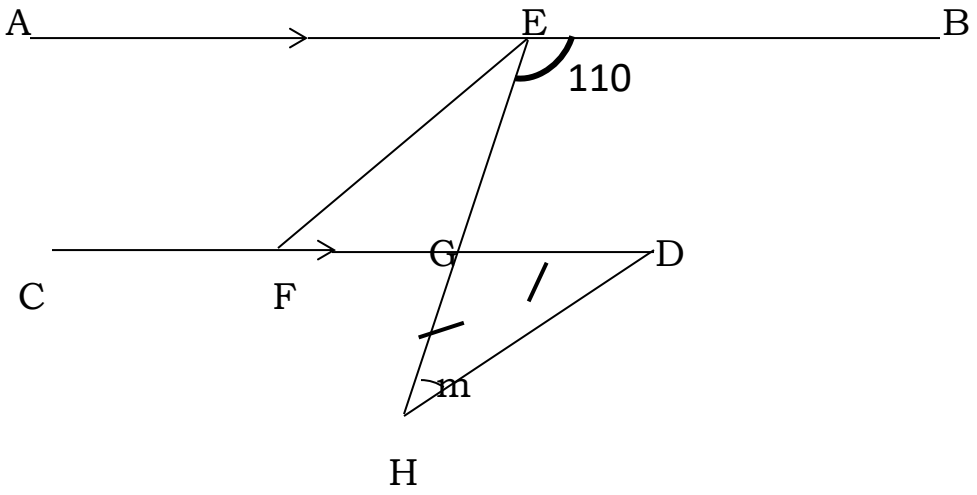
Marks scored	60	m	70	90
No. of pupils	4	2	3	1

(a) How many pupils did the test? ***(1mk)***

(b) If the mean score was 70marks, find the value of m. ***(3mks)***

28. At a certain bookshop, the cost of a counter book is $\frac{2}{5}$ the cost of a dictionary. Mulondo paid sh. 84,000 for the two items. How much did he pay for the counter book only? ***(5mks)***

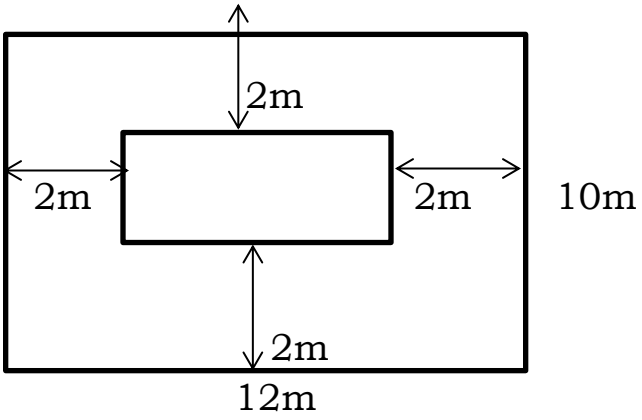
29. In the figure below, line AB is parallel to line CD. Line EF bisects angle AEH and angle BEG = 110^0. Line HG = GD. Study the figure and use it to answer the questions that follow.



(a) Find the value of m ***(3mks)***

(b) Find the size of angle CFE (2mks)

30. A carpet was placed in the middle of the room leaving 2 metres a side as shown below.



(a) Calculate the length and width of the carpet. ***(2mks)***

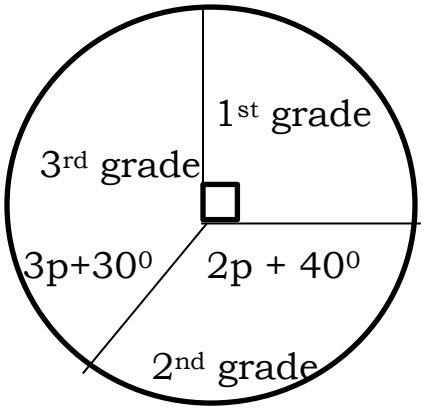
(b) Find the area of the room not covered by the carpet. ***(3mks)***

31. Using a pair of compasses, ruler and a pencil only;

(a) Construct a parallelogram KITE such that line KI = 7cm, angle KIT = 120^0 and line IT = 4cm. ***(4mks)***

(b) Drop a perpendicular line from point E to meet line KI at point A and measure line EA. ***(1mark)***

32. The pie chart below shows the performance of candidates in a certain mock examination of Kamwenge district.



(a) Find the value of p ***(2mks)***

(b) If 180 candidates passed in the second grade, how many candidates sat for the mock examination in that district? ***(3mks)***

END