RAPHA EXAMINATIONS BOARD

P.7 EXAMINATIONS 2024

PRE-MOCK SET 3

Email:raphaexaminationsboard@gmail.com

MATHEMATICS

Time allowed: 2 hours 30 minutes

Random No.							Personal No.		

Candidate's Name: ……

Candidate's Signature: ……

District Name: ……

Read the following instructions carefully:

1. The paper has two sections: **A** and **B.**
2. Section **A** has 20 questions (40 marks)
3. Section **B** has 12 questions (60 marks)
4. Answer **all** questions. **All** answers to both Sections A and B must be written in the spaces provided.
5. All answers must be written using a **blue** or **black** ball point pen or ink. Diagrams should be drawn in pencil.
6. Unnecessary changes in your work may lead to loss of marks.
7. Any handwriting that cannot be easily read may lead toloss of marks.
8. Do **not** fill anything in the table indicated: "For Examiner's use only" and boxes inside the questionpaper.

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: 30 MARKS

1. Use repeated addition to work out: 5 x 6

2. Round off 842.97 to the nearest tenths

3. Work out: 2 – 3 =_____(mod 5)

4. Find the next two numbers in the sequence below; 1, 4,
   9, 16, _____, _____

5. The complementary angle of $(3x - 30)^{o}$ is 40^{o}. Find the value of x.

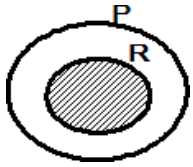
6. Simplify: $2x + 3x - 4x$

7. Work out: $^{-}5 - {}^{+}5$

8. Using a ruler and a pair of compasses only, construct an angle of 45^{o}.

9. Work out: $133_{five} + 124_{five}$

10. Describe the unshaded part in the Venn diagram below.



11. Find the square root of 121.

12. Increase sh. 2000 by 20%

13. Find the median of -1, 2, -3, 3, 7 and -6.

14. Work out the circumference of a circle whose diameter is 7 cm. (Use pi as $\frac{22}{7}$)

15. There are 25 subsets in set Q. How many elements are in set Q?

16. Calculate the GCF of 8 and 12.

17. Work out: -2(3-4)

18. Write XLIV in Hindu Arabic numerals.

19. Solve: 4-3k = -8

20. Express 400 m^2 as hectares

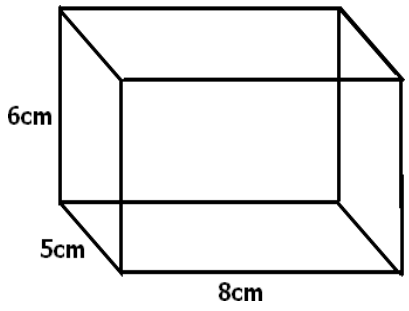
SECTION B: 60 MARKS

21. In a class of 50 pupils, 20 like Mathematics (M) only, 15 like English (E) only, k like both subjects while 5 pupils do not like any of the two subjects.

a) Draw a Venn diagram and represent the above information. (3 marks)

b) Find the number of pupils who like Mathematics. (2 marks)

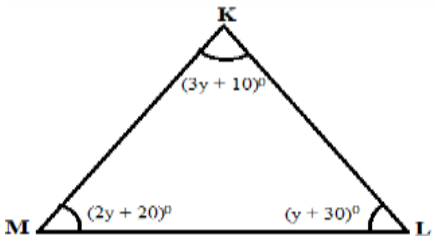
22. The figure below shows a rectangular box.



(a) Work out its volume (3marks)

b) Calculate its total surface area (2marks)

23. Use the figure below to answer the questions that follow.



a) Find the value of y. (3 marks)

b) Work out the size of angle KLM. (2 marks)

24. The table below shows the marks scored by some pupils in the Mathematics test. Use it to answer the questions that follow.

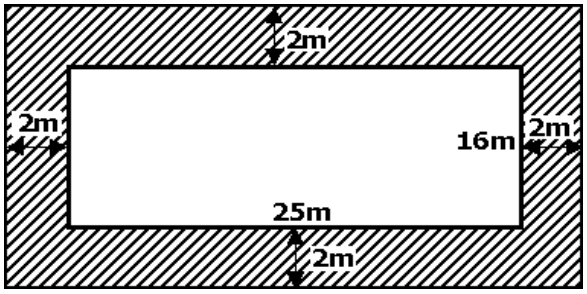
Marks	85	75	62	90
Number of pupils	3	1	4	2

a) How many pupils did the test? (1 mark)

b) Work out the range. (2 marks)

c) Calculate the mean mark. (2 marks)

25. In the figure below, workout the area shaded. (5 marks)



26. In a village of 3000 people, 40% of them are males and the rest are females.

a) Find the percentage of females in the village. (1 mark)

b) If $\frac{1}{6}$ of the males are boys, how many boys are there in the village? (2 marks)

c) How many more females the males are in the village? (2 marks)

27. Matilda bought a tray of eggs at sh. 500 per egg on her way 6 eggs broke and she sold the remaining eggs at sh. 600 per egg. Calculate the percentage loss. (5 marks)

28. a) Using a ruler and a pair of compasses only, construct a triangle KPC where angle KPC = 90^{o}, line PC = 8 cm and line PK = 6 cm. (4 marks)

b) Measure line KC (2 marks)

29. Two men were reporting to the police station at the intervals of 12 days and 18 days respectively.

a) After how long will they take to report to the police station together on the same day? (3 marks)

b) If they reported together on Friday, when will they report together again for the second time? (2 marks)

30. a) What mathematical property will make the statement (2 marks)
2 + 7 + 8 = 2 + 8 + 7correct

b) Simplify: $\frac{0.05x\ 0.1}{0.005}$ (3 marks)

31. Use the number 89.634 to answer the following questions:-

a) Write the value of 3. (3 marks)

b) Expand the above numeral using exponents. (2 marks)

32. a) Solve for a: a(2a)=3x6 (3marks)

b) If m=-1 and n=1, find the value of $\frac{-(m-n)}{m-n}$ (2marks)

END