RAPHA EXAMINATIONS BOARD

PRIMARY SEVEN EXAMINATIONS 2024 (SET 8)
MATHEMATICS

Time allowed: 2 hours 30 minutes

INDEX NO.									

CANDIDATE'S NAME: ....

CANDIDATE'S SIGNATUTE: ....DATE.................................

SCHOOL'S EMIS NO: ....

DISTRICT NAME: ....
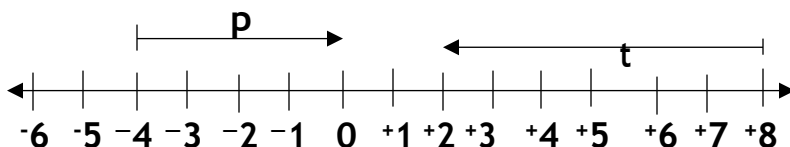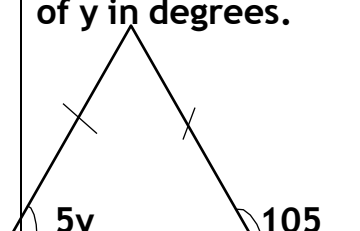
READ THE FOLLOWING INSTRUCTIONS CAREFULLY:

1. This paper has two sections **A** and **B**
2. All the working in both sections **A** and **B** should be shown in the spaces provided
3. All working must be done using a blue or black ball point pen or fountain pen. Diagrams **MUST** be drawn in pencil
4. Unnecessary changes of work may lead to loss of marks
5. Any handwriting that cannot be easily read may lead to loss of marks
6. Do not fill in anything in area indicated for *examiners use only* and those inside the paper

For examiner's use only

SECTION	MARKS
SECTION A	
SECTION B	
TOTAL	

Section A (40 Marks)

1	Workout: **34 + 52**	2	Simplify: **6m − 9m + 7m**
3	Workout: $1\frac{2}{5} \div \frac{1}{4}$	4	Given that set **K = { 4, 6, 7, 8, 9}** and set **N = {1, 2, 3, 4, 5, 6}**. Find **n(K∩N)**
5	Without dividing, show which of the numbers **157** and **3078** is divisible by **9**.	6	Workout: $1011_{two} \times 11_{two}$

7	A dice is tossed once, what is the probability that a factor of **6 appears** on top?

8 Write the integers represented by letters p and t on the number line below.

(i) **t =**   (ii) **p =**

9	Show the time 10: 35 o'clock on the clock face below.	10	In the triangle below, find the value of y in degrees.
			  5y **105**
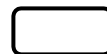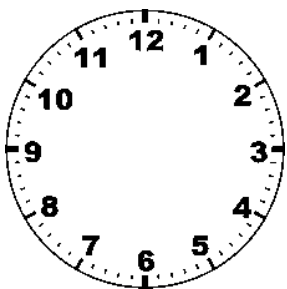
11	The area of a square piece of cloth is **324cm²**. Find the length of each side.	12	Convert **25%** to a fraction in its lowest form.
13	Find the L.C.M of **18** and **45**.	14	How many pieces of thread each measuring **17cm** can be got from a thread with a total measurement of **3.91m**.
15	Sarah bought **12kg** of sugar at **sh 8500** for every **3kg**, how much money did she spend?	16	**Find the length of the arc AB in the diagram below.**

17	A cyclist covers **22½km** in **15** minutes. Express the speed of the cyclist in km/hr.	18	The area of the shaded part of the cyclinder below is **86cm². Find** its volume.

18.

8cm

19	**Using a ruler, a pencil and a pair of compasses only construct an angle of 105⁰ in the space below.**

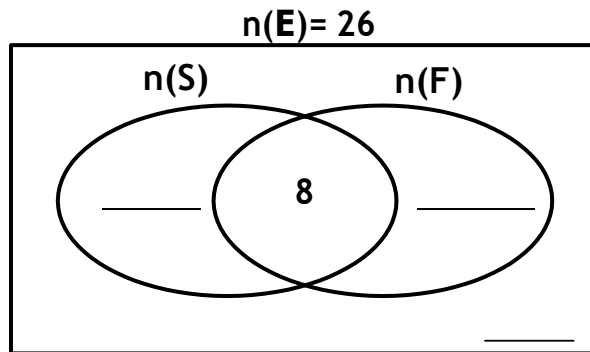| 20	Aashir is 6 times as old as Aashna. If the difference in their ages is 45years. How old is Aashna.

Section B (60 Marks)

21 In a school of 26 teachers, 14 teach Swahili (S), 2m teach French (F) only, 8 teach both subjects while 4 teach other subjects.

(a) Complete the Venn diagram below using the above information.　　　　*(03 marks)*

n(**E**)= 26

(b) How many teachers teach French?　　　　*(02 marks)*

(c) Find the probability of choosing at random a teacher who teaches one subject.　　　　*(01 mark)*

**22** *(a)* Write **694** in Roman numerals.　　　　*(02 marks)*

(b) Find the product of the value of **3** and the value of **5** in the number **13056**.

(03marks)

23 **(a)** Simplify; $\dfrac{0.5 - 0.2}{0.04 + 0.5}$ **(03 marks)**

(b) Express the recurring decimal **0.4848...** as a common fraction. **(02 marks)**

24 **_The exchange rates in a forex bureau are as follows_.**
1US dollar \$ costs Ugsh 3600
1 pound sterling (£) costs Ugsh 4500
1 Kenya shilling (Ksh) costs Ugsh 37

(a) A customer has **Ugsh 765,000**. How many pound sterling will the customer get from the bureau? **(02 marks)**

(b) If a television set costs **333 US dollars**, find the cost of the same television set in Kenya shillings. **(03 marks)**

25	**Study the figure below and use it to answer the questions that follow. Angle KLM is twice the size of angle LKM.**
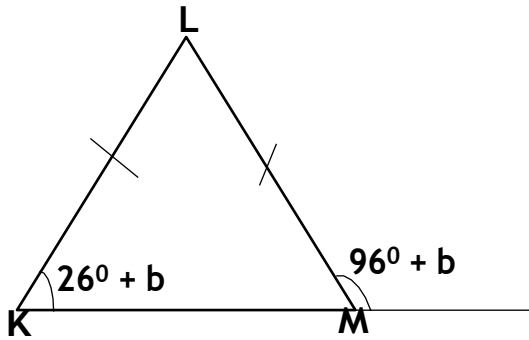
(a) Find the value of **b**. (*3 marks*)

(b) Workout the size of angle LMK (*02 marks*) |
| 26 | **Annet made circular cards of radius 3½cm from a rectangular manilla paper that measures 48cm by 40cm.**
(a) How many cards did she cut out? (*02 marks*)

(b) Calculate the area of the unused manilla? (*03 marks*) |

| 27	*Town A is 150km away from town B. A motorist started his journey from town A at 11:30am driving at a speed of 25km/hr. After driving for 2 hours, he stopped for 30 minutes before continuing with the rest of the journey. He reached town B at 3:00pm.*
	(a) How long did the whole journey take? *(02 marks)*
	(b) Calculate the motorist's average speed for the second part of the journey after resting. *(03 marks)*
28	Kakembo deposited a certain sum of money in the bank which offers an interest rate of 15% per annum. After 6 months he had a total of sh 322,500 in the bank. Find the amount of money deposited in the bank. *(04 marks)*
29	**The pie chart below shows the number of pupils in some classes at White Stars Junior school.**

P.3 (P + 30) %   P.4 (P + 20) %   P.5 (P + 10) %   P.6 (2P - 10) %
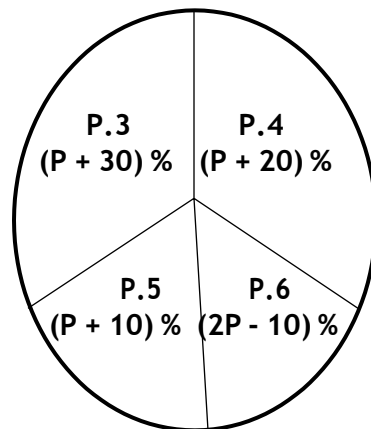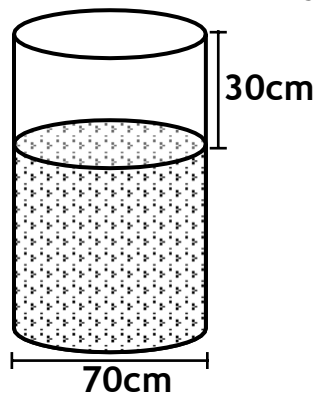
(a) Find the value of **P**. *(02 marks)*

(b) If there are 24 more pupils in P.3 than P.5, how many pupils are there in the classes shown above?   (*03 marks*)

30	The cylindrical tin below is $\frac{3}{5}$ full of milk.

30cm

70cm

(a) Find the height of the whole tin.   (*02 marks*)

(b) Find the amount of milk in the tin.   (*03 marks*)

31	If m = 4 and n = ⁻2,
	(a) **find the value of 4n – 2m.** ᴾ ᵀ⁽ᴼ₂ *marks*)

(b) Find the solution set for $-16 < 3k - 4 < 5$ *(03 marks)*

32	**Town A is 420km from town B on bearing of 235^0 and town C is 300km from town A on bearing of 300^0.**

(a) Draw a sketch diagram showing the three towns.   *(01 mark)*

(b) Using a scale of 1cm to represent 60km, draw an accurate figure showing the three towns in the sketch above.   *(04 marks)*