SUREKEY EXAMINATIONS BOARD

PRIMARY LEAVING MOCK EXAMINATION

2023

MATHEMATICS

Time Allowed: 2 hours 30 minutes

Index No.	EMIS No.						Personal No.		

Candidate's Name: .....

Candidate's Signature: .....

School EMIS No:

Read the following instructions carefully:

1. Do not write your **school** and **district name** on this paper.
2. This paper has two sections: **A** and **B**. Section **A** has **20** questions and Section **B** has **12** questions. The paper has **16 printed pages** 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 easily be read may lead to loss of marks.
7. Do not fill anything in the table indicated: **"For Examiners' Use only"** and boxes

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		

SECTION A: 40 MARKS

Answer **all** questions in this Section

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

1. Workout:

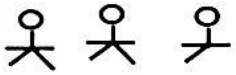
$$\begin{array}{r} 2\,0\,2\,3 \\ -\ 2\,0\,3 \\ \hline \end{array}$$

2. Write the value of 9^3 in words.

.....

.....

3. The diagram below shows the number of pupils present in a P.7 class in three streams on a certain day at Kambugu Primary School.

Stream	**Pupils present**
P.7 Blue	
P.7 Yellow	
P.7 Green	

KEY:

 represents 8 pupils.

 represents 4 pupils.

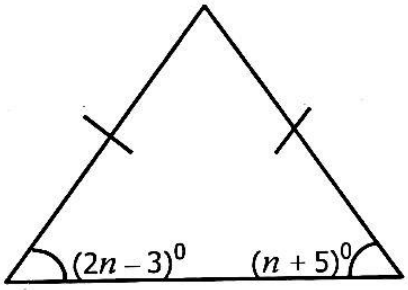
How many pupils attended that day in all the three streams?

4. Kajjumbi paid Sh.92,000 for 4 text books. How much did he pay for each text book?

5. Given that R = {first five composite numbers},
Q = {first 5 triangular numbers}.

Find n(R ∩ Q).

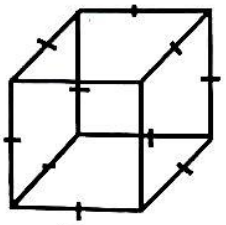
6. Find the value of n in the figure below.



7. The average height of Pan, Jan and Fan is 51cm. If the height of Pan is 53cm and that of Jan is 46cm, find the height of Fan.

Turn Over

8. The figure below shows a cube whose edges are made of metal wire. If the length of one edge is 10m. Find the length of the wire needed to make the cube.



10m

9. Solve the inequality below and give the solution set that satisfies it.

$$3(2 - k) < 15$$

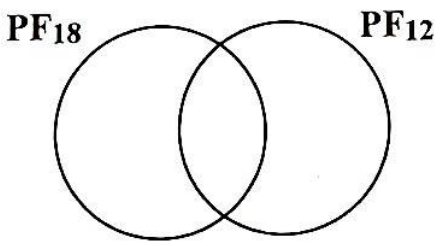
10. Workout: $4\frac{2}{3} \div 2\frac{1}{3}$.

11. Calculate the perimeter of a rhombus whose longest and shortest diagonals are 8cm and 6cm respectively.

12. A workshop that started at 7:30p.m. took $3\frac{1}{2}$ hours. At what time did it end?

13. Using a ruler, a pencil and a pair of compasses only, construct an angle of 105^0 in the space provided below.

14. Using the Venn diagram below, workout the GCF of 18 and 12.



Turn Over

15. Given that $x = 2y + 1$. Complete the table below.

x	5	.....
y	.....	4

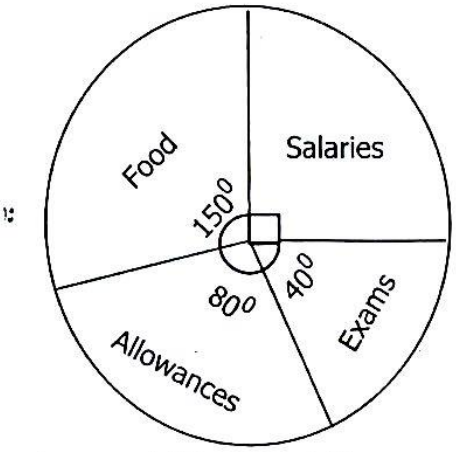
16. Workout: $1212_{four} \times 13_{four}$.

17. The list below shows prices of different items in Akaasi Supermarket.

- 1kg of beans costs sh.3,000
- 500g of rice cost sh.1,600
- 3 black books cost sh.10,500.

If Opolot buys 1kg of beans, 1½ kg of rice and 3 black books, how much money does he pay?

18. The circle graph below shows how the head teacher of Patrid P/S planned for second term's expenses.



If the head teacher spent 12 million shillings on paying salaries that term, how much was the total budget for the school?

19. Amos is twice as old as Yudayah. If their total age is 24 years. How old is Yudayah?

20. Find the cube root of 1000 in the space below.

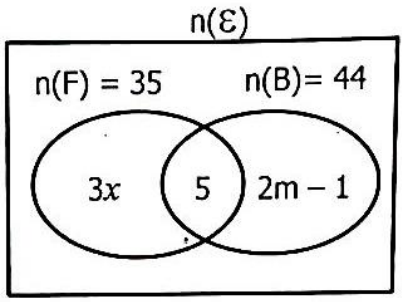
Turn Over

SECTION B: 60 MARKS

Answer **all** questions in this section

Marks for each question are indicated in brackets.

21. In the Venn diagram below, 35 pupils like eating Fish (F), 44 pupils like eating Beans (B) and 5 pupils prefer eating both dishes. Study it and use it to answer the questions that follow.



(a) How many pupils like eating fish only? (02 Marks)

(b) Find the probability of picking a pupil who likes eating beans only to lead others in prayer. (03 Marks)

22. (a) Solve for x in, $\frac{2x+2}{3} = \frac{x+3}{2}$ (02 Marks)

(b) What is the value of $\frac{bc-d}{c^2}$ when b = 8, c = 3 and d = 6? (02 Marks)

23. The diameter of a wheel of a bicycle is 35cm, the bicycle covers 33 km.

(a) Find the number of revolutions the wheel makes to cover that distance. (Use π as $\frac{22}{7}$) (03 Marks)

(b) If the bicycle covers 110 metres per minute, in how many hours will it cover the 33km? (02 Marks)

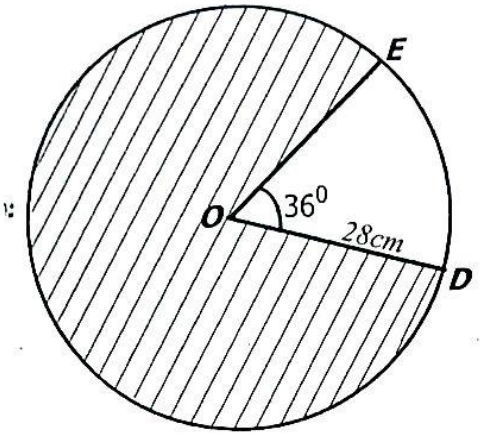
Turn Over

24. (a) Express 36km/hr as metres per second. (02 Marks)

(b) A car driver covered a distance of 100 km at a steady speed of 50 km/hr and a lorry driver covered the same distance but took half an hour more than the car driver. How many minutes did the lorry driver take to cover the distance? (03 Marks)

25. Kamoga is an Estates Manager who buys and sells houses. He sold two houses, one at sh.33,000,000 making a profit of 10% and the other house at sh.60,000,000 making a profit of 20%. How much had Kamoga paid for the two houses? (04 Marks)

26. The diagram below shows sector *EOD* of 36^0 in a circle with radius 28cm. Part of the circle is shaded. Study and use it to answer the questions below.



(a) Calculate the area of the circle. (Use π as $\frac{22}{7}$) (02 Marks)

(b) Find the area of the shaded part. (03 Marks)

27. The table below shows the rate at which different currencies were bought and sold in a commercial bank during the month of June in 2003. Use it to answer the questions that follow.

Currency	Buying in Ug.sh	Selling in Ug.sh
1 US dollar ($)	1,800	1,820
1 British pound (£)	3,600	3,650
1 Kenya shillings (Ksh)	25.0	27.0

(a) How many US dollars ($) did James get for Ug.sh 254,800 by then?
(02 Marks)

(b) Kenyatta came from Kenya with Ksh.17,520,000 and exchanged it for British sterling Pounds (£). How many pounds did he get from the bank?
(03 Marks)

28. Three girls, Nankya, Nandu and Nambi shared a certain amount of money. Nankya got sh.60,000, Nandu got sh.90,000 and Nambi got 40% of the shared money.

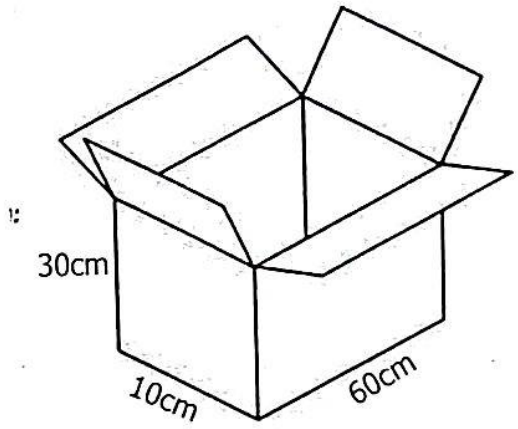
(a) How much money was shared by the three girls altogether? (03 Marks)

(b) How much did Nambi get? (01 Mark)

(c) What percentage of the total amount shared did Nankya get? (02 Marks)

Turn Over

29. Kolonyi packed cylindrical tins of height 10cm and diameter of 5cm in a rectangular box below. Use it to answer the questions that follow.



(a) How many tins will be packed in the box? (02 Marks)

(b) Find the space (in cm^3) that will remain after packing the tins in the box. (Use π as 3.14)

(03 Marks)

30. Frank spent $\frac{1}{4}$ of his salary on food, $\frac{1}{12}$ on clothing and lent sh.300,000 to Olinde at an interest rate of 5% per year for 4 months.

(a) How much does Frank get as salary? (03 Marks)

(b) How much money altogether did Olinde pay back? (03 Marks)

31. In a quiz contest, 5 marks were awarded for any correct response and 2 marks deducted for any wrong response given by a contestant. How many correct responses were given by a contestant who scored 72 marks from the 20 questions that were asked by the panel? (04 Marks)

32. Gogolio P/S is on a bearing of 225^0, 88km away from Edenge P/S. From there, you will find Adungu P/S which is 55km away on a bearing of 315^0.

(a) Using a scale of 1cm to represent 11km, draw an accurate diagram to show the positions of the three schools. (04 Marks)

(b) What is the bearing of Edenge P/S from Adungu P/s? (01 Mark)

(c) Workout the shortest distance from Adungu P/S to Edenge P/S in Km. (01 Mark)

END