SUREKEY EXAMINATIONS BOARD

PRIMARY SEVEN LOWER SERIES EXAMINATION

2023

MATHEMATICS

Time Allowed: 2 hours 30 minutes

Index No.	**EMIS No.**						**Personal No.**		

Candidate's Name: ……

Candidate's Signature: ……

School Name: ……

District Name: ……

Read the following instructions carefully:

1. Do not forget to 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 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		

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SECTION A: 40 MARKS

Answer **all** questions in this Section

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

1. Workout: 28 ÷ 7

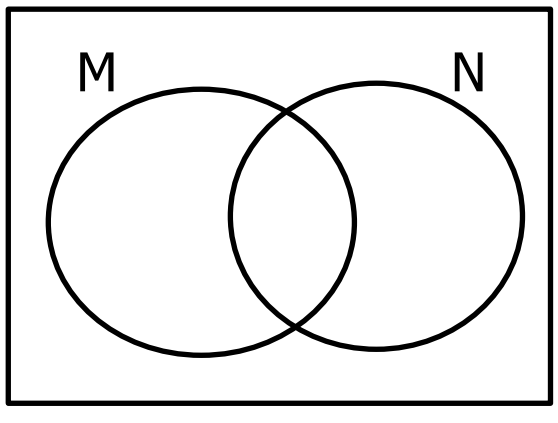
2. Write, "Seven hundred thousand sixty four " in figures.

3. Workout: $1\frac{3}{5} + 1\frac{1}{2}$,

4. Given that Set M = {all composite numbers between 1 and 10}

   Set N = {0, 1, 2, 3, 4, 5, 6, 7}

   Represent the above information on the Venn diagram below and find the number of subsets that can be formed from Set M n N.



5. What is the place value of 5 in the figure 110.65?

6. Using a pair of compasses, ruler and pencil only, construct the supplementary angle of 75^0 at point A.

A

7. A water tank leaks at a rate of 200*ml* per minute. If it holds 120 *litres* of water when full, how long will it take to empty the tank?

8. Find the mean of 5y, 4, 2y and y.

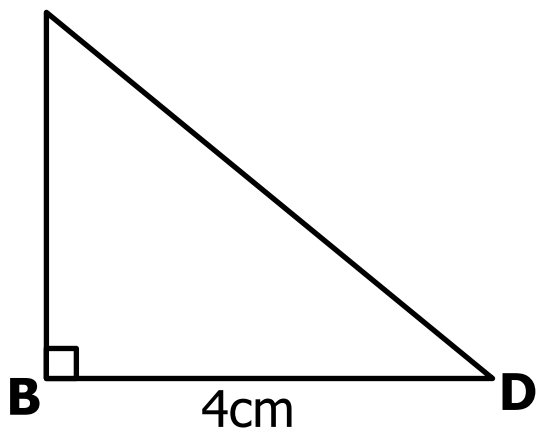
9. Workout the cube root of the next term in the number pattern below:

1, 8, 27, 64, _____

Turn Over

10. If an aircraft moved at speed of 800km /hr. What distance did the aircraft cover in 15 minutes?

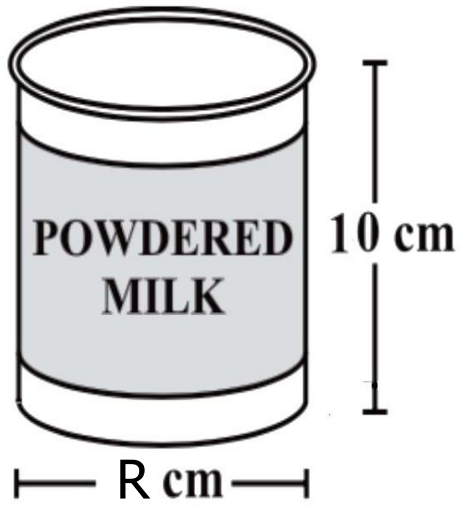
11. Below is a triangle ABD whose area is $16cm^2$ and a base of 4cm. How high is the triangle?



12. Simplify: (4y – 6) - (3y + 8).

13. In a candidate class, there are 3 streams, Green with 24 pupils, Yellow with 30 pupils and Blue with 36 pupils respectively. Find the least number of books each stream can share equally.

14. The volume of the Powdered Milk tin below is 1540cm^3.



Find the diameter of the tin. (Use π as $\frac{22}{7}$)

15. A car uses a litre of petrol to cover 8km, if a litre of petrol costs shs.3680, how much petrol will be needed to cover a journey of 120km?

16. Solve the inequality below and write the solution set that satisfies it.

$$10 \leq 3x - 2 < 16$$

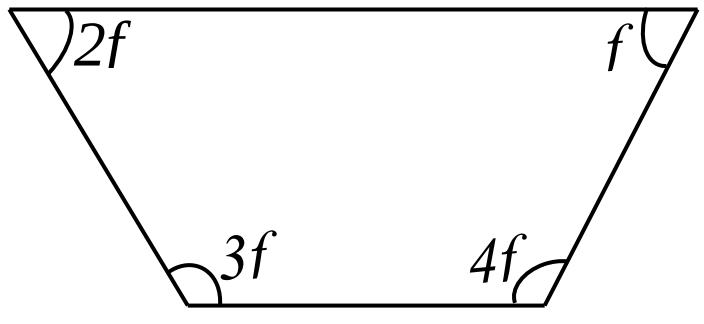
Turn Over

17. Given that y = -2, X = -3 and k = 5

Evaluate: $\frac{2\,(x - k)}{(y + x) - k}$

18. In a class of 63 pupils, the ratio of boys to girls is 2:7, Find the number of the girls in the class.

19. Find the value of f in the quadrilateral figure below.



20. A Mathematics lesson ended at 11:15am. If it lasted for $1\frac{3}{4}$ hours At what time did it start?

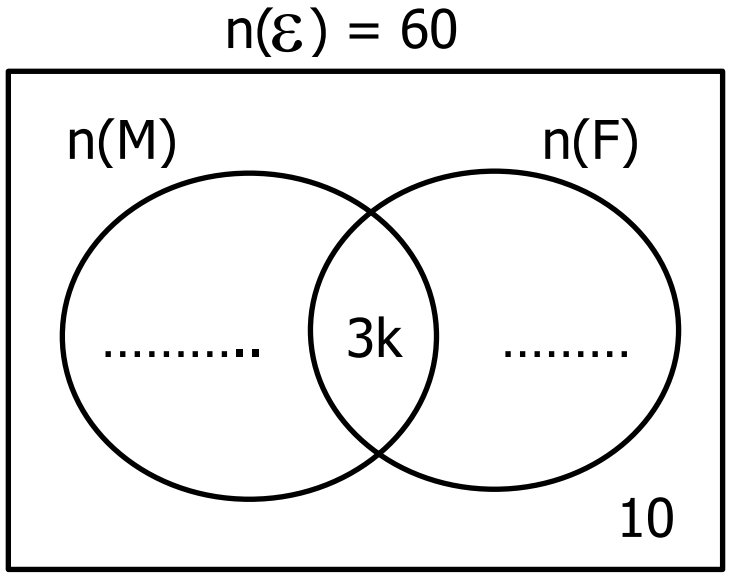
SECTION B: 60 MARKS

Answer **all** questions in this section

Marks for each question are indicated in brackets.

21. In a class of 60 pupils, 35 like Meat (M), 30 like Fish (F), 3k pupils like both meat and Fish while 10 pupils do not like any of the two types of food.

(a) Complete the Venn diagram below using the above information. (02 Marks)



(b) How many pupils ate both types of food? (02 Marks)

(c) What is the probability of picking a child who eats only one type of food to be the class monitor? (02 Mark)

22. Below is a list showing how different items are sold in Mr.Bashir's shop.

Maize flour	shs. 2,000 per kg
Soap	shs. 3,500 per bar
Bick pen	shs. 600 each

(a) A customer bought 2 bars of soap, a dozen of pens and 7kg of maize flour. Calculate Bashir's total expenditure.

(03 Marks)

(b) If the customer was paid back $\frac{1}{10}$ of the total expenditure as a discount, How much did he pay ? (02 Marks)

23. (a) The probability of choosing a boy as a class monitor is 3 out of 10. There are 30 boys in the class, how many are girls? (02 Marks)

(b) How many children are in the class? (02 Marks)

(c) If set F={1,2,4,6,8} What is the probability of picking a member less than 4? (02 Marks)

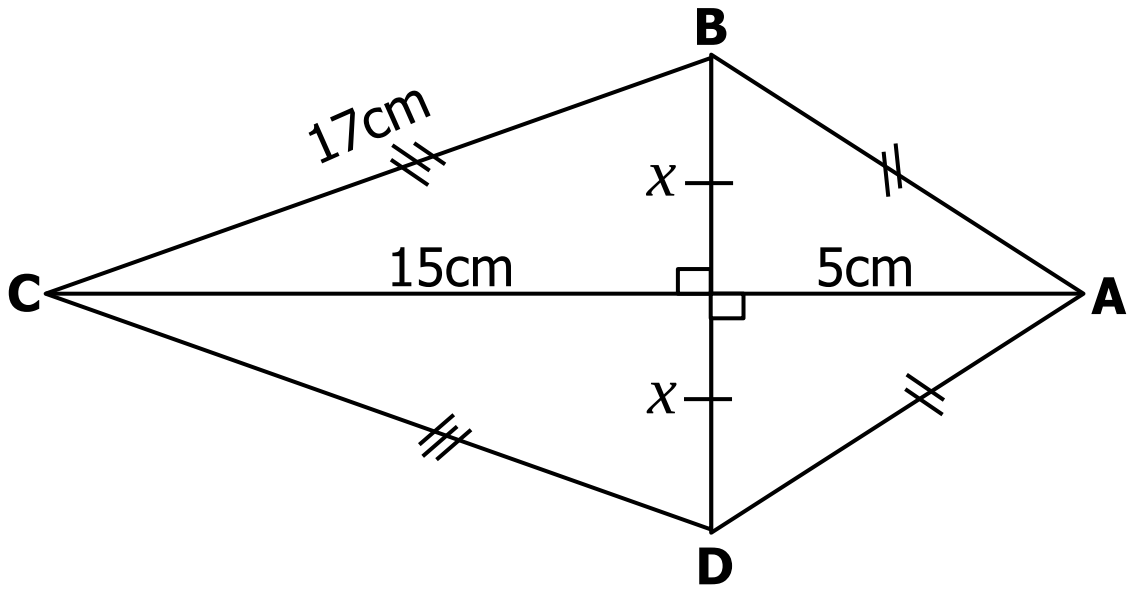
24. (a) The school bursar deposited a certain amount of money in a bank which offers an interest of $2\frac{1}{2}$ % per year for 2 years. If he earned shs.180,000 as interest, how much money did he deposit in the bank? (03 Marks)

(b) If he withdraw his money after the two years, how much money did he get? (02 Marks)

25. (a) Using a ruler, pencil and a pair of compasses only, construct a rhombus RSTV with RT = 8cm and SV = 5cm (04 Marks)

(b) Find the perimeter of the rhombus. (02 Marks)

26. In the figure below, ABCD is a kite where AC = 20cm, length BC = CD while BA = DA. Use it to answer the questions below.



(a) Find the value of x. (02 Marks)

(b) Find the length of diagonal BD. (01 Mark)

(c) Work out its area. (02 Marks)

27. The table below shows the journey for two buses. Horizon bus travelling from Kabale to Kampala and Jaguar bus travelling from Kampala to Kabale. Study it and answer the questions that follow.

	HORIZON BUS		**JAGUAR BUS**		
Station	Arrival	Departure	Station	Arrival	departure
Kabale	…….	7:00am	Kampala	…….	7:00am
Ntungamo	8:45am	9:00am	Masaka	9:00am	9:30am
Mbarara	10:30am	10:35am	Lyantonde	10:30am	11:00am
Lyantonde	11:45am	12:00noon	Mbarara	12:00noon	12:15am
Masaka	1:00pm	1:30pm	Ntungamo	2:00pm	2:30pm
Kampala	3:45pm	…….	Kabale	4:00pm	…….

(a) At what time did both buses departure? (01 Mark)

……

(b) How long did the journey between Masaka and Kampala take for;

(i) Horizon bus (01 Mark)

(ii) Jaguar bus (01 Mark)

(c) How far is Masaka from Ntungamo if Horizon bus was travelling at an steady speed of 80km/hr? (02 Marks)

28. Four cards numbered, 3, 8, 4 and 2, were used to form the largest 4 digit number.

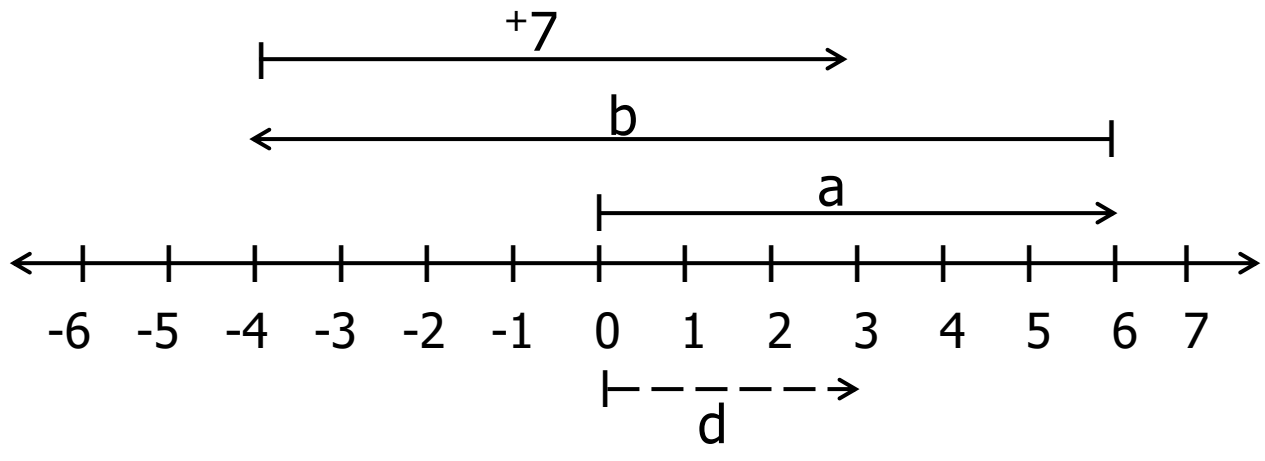
(a) What was this number? (01 Mark)

(b) Change the value of 4, in the above number to base five. (03 Marks)

(c) Work out the sum of the value of 3, and the place value of 8 in the number above. (02 Marks)

29. A baker mixed wheat flour and yeast to make a piece of dough. If 14 kg of wheat flour were used and this was 40% more than the yeast used, find the weight of the piece of dough that was made in Kilograms. (04 Marks)

30. Study the number line below and use it to answer the questions that follow.



(a) What integer is represented by each of the following arrows on the number line above? (03 Marks)

(i) a .....

(ii) b .....

(iii) d .....

(b) Write the mathematical statement shown on the number line.
(01 Mark)

31. Sandra is 4 times as old as Agume. The difference in their age is 36 years.

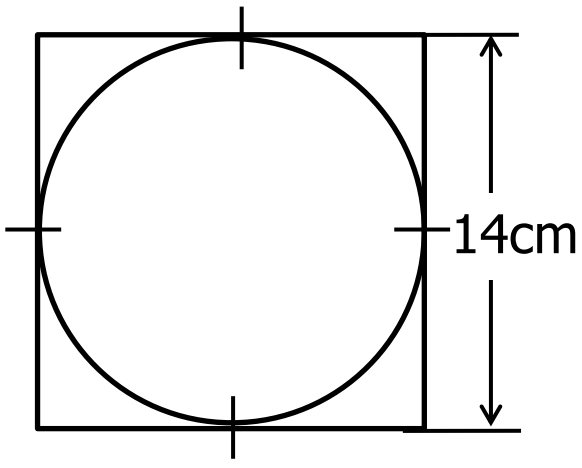
(a) How old is Agume? (03 Marks)

(b) In how many years will Sandra be twice as old as Agume?

(02 Marks)

32. The diagram below shows a circle placed in a square. Use it to workout area of the parts of the square that the circle did not cover. (Use π as $3\frac{1}{7}$)

(03 Marks)



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