MBALE CITY ACADEMIC BOARD
PRIMARY LEAVING MOCK EXAMINATIONS
2024
MATHEMATICS

Time Allowed: *2 Hours 30 Minutes*

Index No.	EMIS No.						Personal No.		

Candidate's Name: ....

Candidate's Signature: ....

School EMIS No: ....

District ID: ....

READ THE FOLLOWING INSTRUCTIONS CAREFULLY:

1. This paper has two sections: **A** and **B**.
2. Section **A** has **20** questions (**40** Marks).
3. Section **B** has *1*2 questions (**60** Marks).
4. Attempt all questions in both sections. All answers to both sections **A** and **B** must be written in the spaces provided.
5. All answers must be written in blue or black ball point pens or ink. Only diagrams and graph work must be done in pencil.
6. Unnecessary alteration of work will lead to loss of marks.
7. Any handwriting that cannot be easily read may lead to loss of marks.
8. Do not fill anything in the boxes indicated:

"FOR EXAMINER'S USE ONLY"

Please turn over

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SECTION A: 40 MARKS

*Attempt **all** questions in this section.*
*Questions **1** to **20** carry **two** marks each.*

1. **Work out:** $18 \div 3$

2. Write **909,044** in words.

3. **Work out:** $\frac{3}{4} \div 1\frac{1}{2}$

4. Use a ruler, a pair of compasses and a pencil to construct an angle of **105°**.

5. Convert **0.48km** to metres.

6. Solve the equation: $2 + \frac{1}{3}b = 4$

7. Use distributive property to work out:
$(0.65 \times 144) + (56 \times 0.65)$.

8. If **5 pens** cost **sh.30,000**. Find how many more pens will **sh.48,000** buy at the same rate.

9. In the venn diagram, shade region **(P-Q)^I**

10. Express $0.\overline{72}$ as a common simplified fraction.
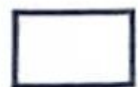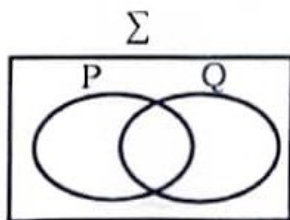
11. Work out the mean of
$(2x + 3)$, 4 , $2x$ and $4x - 3$.

12. The triangle **ABC** has an area of **32cm²** . Find the perimeter of the triangle.
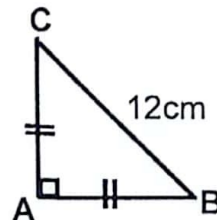
13. The **LCM** and **GCF** of **30** and **Y** is **180** and **9** respectively. Find the value of **Y**.

14. The two base interior angles of an isosceles triangle are **(2p+50⁰)** and **(4p-20⁰)**. Evaluate the value of **p**.

15. The Primary Leaving Mock preparations started on Monday and took **29** days. What day of the week did the preparation end?

16. Calculate the speed of a motorist who covered a distance of 180 kilometers in $2\frac{1}{2}$ hours.

17. A bicycle wheel has a diameter of 70cm. Find the number of revolutions it can make in 22km. $\left(\text{Use } \pi \text{ as } \dfrac{22}{7}\right)$

18. What number has been expanded below?

$(2 \times 10^3) + (9 \times 10^1) + (6 \times 10^0)$

19. Find the next number in the sequence:

12, 15, 14, 17, 16, 19, ____

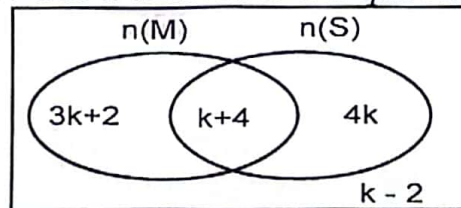20. If $\sqrt{x} = 4$ and $\sqrt{y} = 9$, find the value of x - y.

□

SECTION B: 60 MARKS

*Attempt **all** questions in this section.*

*Marks for **each part** of the question are **indicated** in the brackets*

21. In a class, pupils like Mathematics (M) and Science (S) as shown on the venn diagram below. *Use it to answer the questions that follow.*

n(M)   n(S)

3k+2   k+4   4k

k - 2

a) If there are **12** more pupils who like Science than Mathematics only; Find the value of **k**.   *(02 marks)*

b) What is the probability that a pupil picked at random likes Mathematics?   *(03 marks)*

22a) Using a ruler, a pencil and a pair of compasses only, construct a square in a circle of radius 4cm. *(03 marks)*
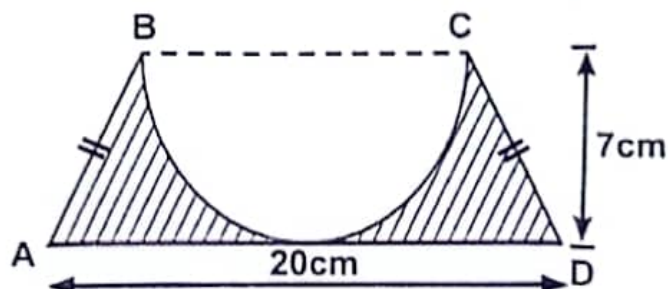
b) Measure the length of the side of the square. *(01 mark)*

23a) **Work out:** $1\ 1_{\text{two}}$ *(02 marks)*
$$\begin{array}{r} 1\ 1_{\text{two}} \\ \times\ 1\ 1_{\text{two}} \\ \hline \end{array}$$

b) Find the number whose standard form becomes **2.954 x 10^2.** *(02 marks)*

c) Factorise completely:
$3n^2 + 15n$ *(02 marks)*

24. **The figure below is a semi-circle in an isosceles trapezium.** *Study it carefully and answer the questions that follow.*

a) Find the length of arc BC. $\left(\text{use } \pi = \dfrac{22}{7}\right)$ (02 marks)

b) Work out the area of the shaded part: $\left(\text{use } \pi = \dfrac{22}{7}\right)$ (03 marks)
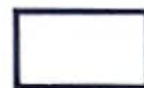
25. The unshaded part in the diagram below represents the number of pupils who are absent in a class of **360** pupils.

Given that two thirds of the pupils who are present and a third of the pupils who are absent are girls.

a) Find the number of girls in the class.

(04 marks)

b) How many boys are in the class? (02 marks)

26 The capacity of a tank is 40 litres and its weight is 65kg when filled with milk. The empty tank weighs 5 kg.

a) Find the weight of 20 litres of milk. (03 marks)

b) What will the weight of the tank be when it is a third full of milk? (03 marks)

27 The sum of three consecutive even numbers is 78.

a) Find the numbers if the last number is **n**. (03 marks)

b) Calculate the product of the first and third numbers. (02 marks)

28. A motorist started his journey of **135km** at **8:00 a.m.** at an average speed of **40km/h**. At **9:30a.m**, his car broke down and the repair took **30** minutes. At what speed must he drive the remaining distance in order for him to reach his destination at **11:30a.m.?** *(05 marks)*
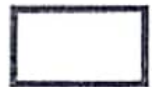
29 **Solve the equation:**
a) $3(y-1) - 6(y-2) = 24$ *(03 marks)*

(b) **Simplify:** $\dfrac{1}{2}(4a+2b) - \dfrac{1}{3}(6a-3b)$

(02 marks)

30a) The exterior angle of a regular polygon is 45°. Find its interior angle sum. *(03 marks)*

Find the angle that is $\frac{1}{2}$ of its complement. *(02 marks)*

<div style="border:1px solid; width:60px; height:40px"></div>

31 The table below shows the buying and selling rates of different currencies at a forex bureau. *Use it to answer the questions that follow.*

Currency	Buying rate	Selling rate
1 US Dollar	Ug sh. 3,600	Ug sh. 3,700.
1 Pound Sterling	Ug sh. 4,800	Ug sh. 4,850
1 Kenyan shilling	Ug sh. 35	Ug sh. 36

a) Paul has 28 dollars. How much does he get in Uganda shillings? *(02 marks)*

b) If a trader had 300 pounds, find how many Kenyan shillings he will get. *(03 marks)*

32. **The graph below shows the daily study attendance of a P.7 class of 100 pupils.** *Study and use it to answer the questions that follow.*
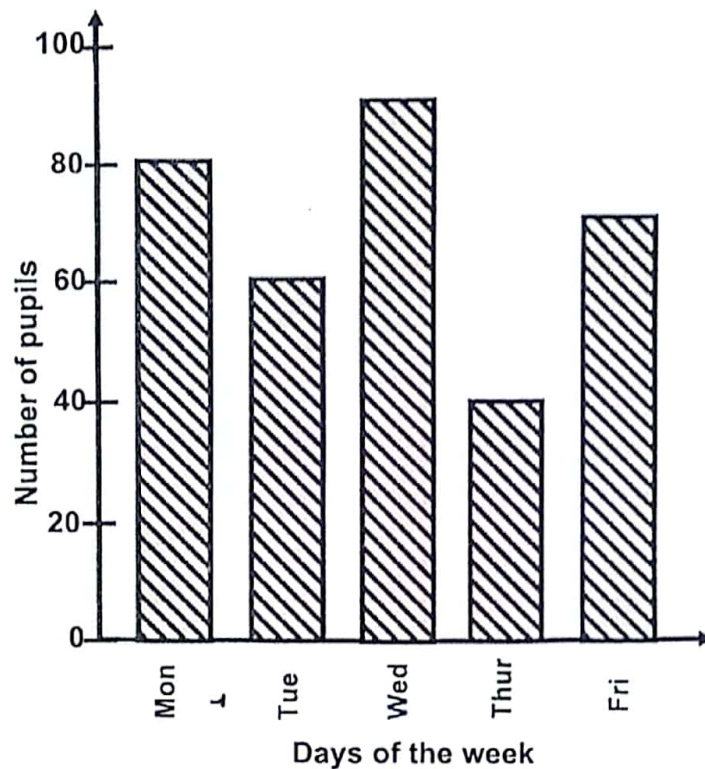
a) How many pupils were absent on Friday? (02 mark)

b) Which day had the highest number of absentees? (02 mark)

c) Calculate the average number of pupils who were absent that week. (02 marks)