MASAKA CITY EXAMINATION BOARD
MOCK EXAMINATION- 2022
MATHEMATICS
Time allowed: 2hours 15 minutes

Index No. ._____/_____/_____/_____
Student's Index   Serial No.   Random No.   Year

Candidate's name: ………………………………………………………………….

Candidate's Signature: …….…………..…..………………………………………..

School Name. ………………………….…..………………………………………...

Read the following instructions carefully:

1. This paper has two sections: **A and B**. Section A has 20questions and **Section B** has12questions.

2. Answer **all** questions. All the working for both Sections **A** and **B** must be shown in the spaces provided.

3. **All** working must be done using a **blue** or **black** Ball point pen or ink. Any work done in pencil will **NOT** be marked except drawings and diagram.

4. Unnecessary **changes** in your work and Hand writing that cannot be easily read may lead to loss of marks.

5. Do not fill anything in the table indicated **"For examiners' use only"** and the boxes inside the Question paper.

6. **No calculators** are allowed in the examination Room.

FOR EXAMINERS' USE ONLY		
Qn. No.	MARKS	EXR'S NO.
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: 40 MARKS
Answer all questions in this Section
Questions 1 to20carry two marks each

1. Work out: 2   4

    x   2

   _____

   _____

2. Write in figures: sixty-three thousand, twenty-eight.

3. Simplify: ½ (6m-4x)

4. Complete the number line below showing the sentence $+4 - ^-3 = ^+7$

   -6 -5 -4 -3 -2 -1   0 +1   +2 +3   +4   +5
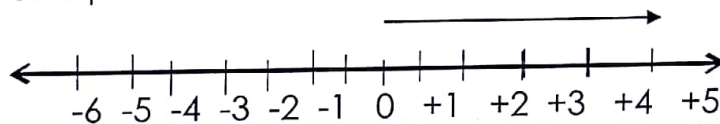
5. Use the distributive property to work out

    (126÷3)   +   (27÷3)

6. Given that $\varepsilon =\{1 ,2,3,4,5,6,7,8,9\}$ $A =\{2,4,6,8\}$

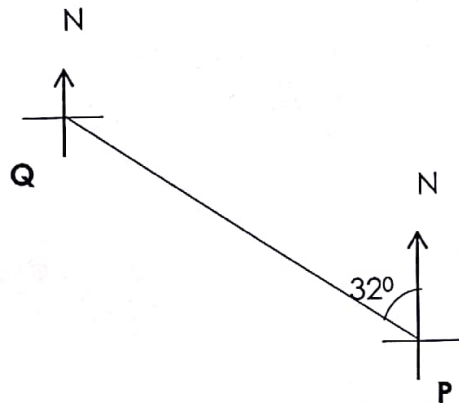 $B = \{$ prime numbers less than 10 $\}$

   Find   AnB

7. Find the next two numbers in the sequence below

   37, 35, 32, 27, _____,_____
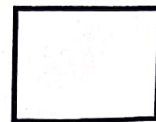
8. In a class, the ratio of boys to girls is 3:5 respectively. if there are 8 more girls than boys how many pupils are in the class?

9. The diagram below shows the position of two schools P and Q. use it to answer the question.

N

Q

N

32^0

P

Work out the bearing of town Q from town P.
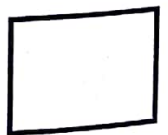
Express 409.5 in standard form.

10. A birth day party ended at 11:15P.M. If the party lasted 1½ hours. At what time did the party start?
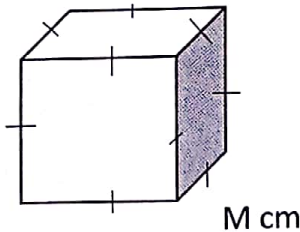
11.   What number has been expanded to give

(3 x 10²) + (5 x 10⁻¹)

12   A child ate ○○ △ oranges in a week. Given that ○ stands for 4 oranges, how many oranges did the child eat altogether

13. The average of 3,5, (P +4) and P is 8. Find the value of P.

14. The figure below is a cube. It has a total surface area of 150cm². Find the value of m.

M cm

15. Subtract (2k – 4) from (5k – 4)

16. Using a pair of compasses, ruler and pencil only, construct an angle of 105^0

17. Given a = bc b = 4 and c =3, find the value of c (a-b)

18. A rider took 20 minutes to cover a journey while moving at a speed of 18 km/hr. Calculate the distance the rider covered.

19. A farmer deposited sh. 72,000 in a Sacco. After one year, the farmer earned a simple interest of sh. 3600. Calculate the simple interest rate per year.

SECTION B: 60 MARKS

Answer all questions in this section

Marks for each question are indicated in brackets

20   a) Simplify $\dfrac{1}{2} - \dfrac{3}{4} + \dfrac{5}{8}$ (2marks)

b) Workout $\dfrac{3.9 + 3.6}{0.06 \times 0.5}$ (3marks)

21.   In a class of forty seven pupils, all of them like music, (3m-4) like RE and music only, (M+6) like music and Art only , (M+2) like all the three subject, while (M+1) like only music.

a)   Use the above information to complete the Venn diagram below.
      (2marks)
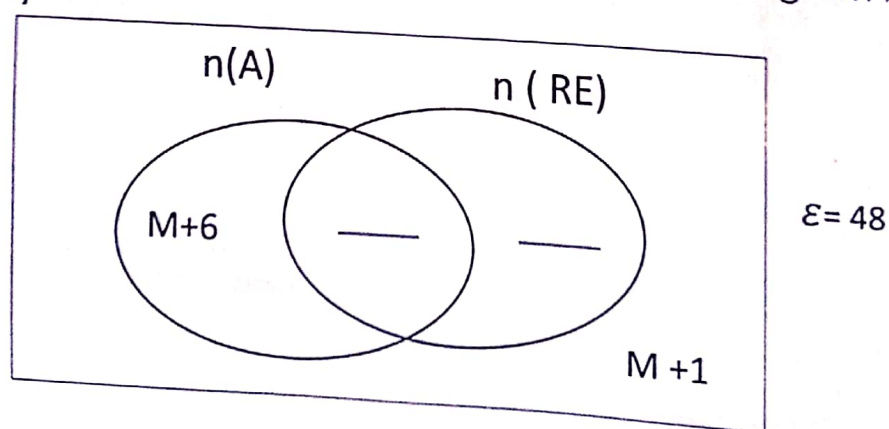
b) How many members like all the three subjects?
                                                              (3marks)
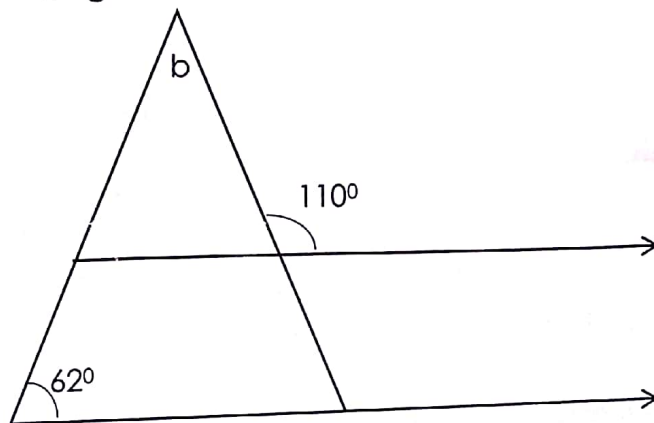
22.   a) Solve the inequality:

$2 (x + 4) < 5x - 4$
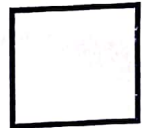
(2marks) ☐

b) Solve: $\dfrac{2x + 4}{5} = 6$ (3marks)

23. Using the figure below, find the size of the angle marked b in degrees.

(2marks)

b) The exterior angle of a regular octagon is $(3x + 18^0)$. Find the value of x.

(3marks)

24.   Our school lorry uses 6 litres of diesel for every 30km.
     a) How much diesel is needed for a journey of 250 km?   (2marks)

b) If one litre of diesel costs sh. 5200, find the amount of money needed to fuel the lorry to run for 1½ hours at a speed of 80km per hour.

(3marks)

25. The diagonals of Parallelogram bisect each other. Using a pair of compasses and a ruler construct a parallelogram PQRT, given that PQ=7cm PR = 10cm and QT =8cm. (5marks)

Measure $\overline{QR}$. (1mark)

26. Mary went shopping and bout the following items
    4 onions for sh. 2000
    1½ litres of cooking oil at sh. 4000 per half litre
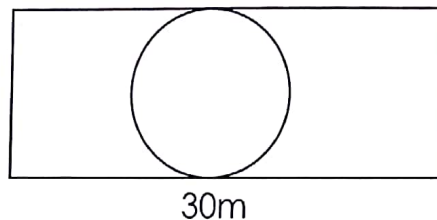   20 tomatoes at sh. 1000 for every 4 tomatoes
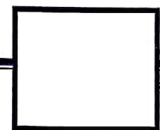   2 litres of milk at sh. 1600 per liter (3marks)
    If Mary was given a change of shs. 27,800. How much money did she have at the beginning? (2marks)

27. A circular fish pond was dug in a rectangular piece of land as shown below.

30m

Given the area of the pond is 616m², Calculate the distance

around the rectangular piece of land. $(\pi = \frac{22}{7})$ (5marks)

28. A total of 2400 home study books were distributed to four schools as follows: School A received $\frac{1}{3}$ of the total number, school B received $\frac{2}{5}$ of the remainder. School C and D shared the remaining books in the ratio of 5:3 respectively.
How many home study books did each of the school get?   (5marks)

29 A motorist left town A travelling at a speed of 60km/hr. for 150minutes and arrived town B at 12:00noon. After taking lunch for 30 minutes he continued to town C travelling at a speed of 80km/hr arriving at 2:30P.M.
a) Find the distance from town A to town B   (2marks)

b) Calculate the average speed of the motorist for the whole journey.   (3marks)

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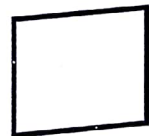
30. Study the coordinate graph below and use it to answer the questions that follow.
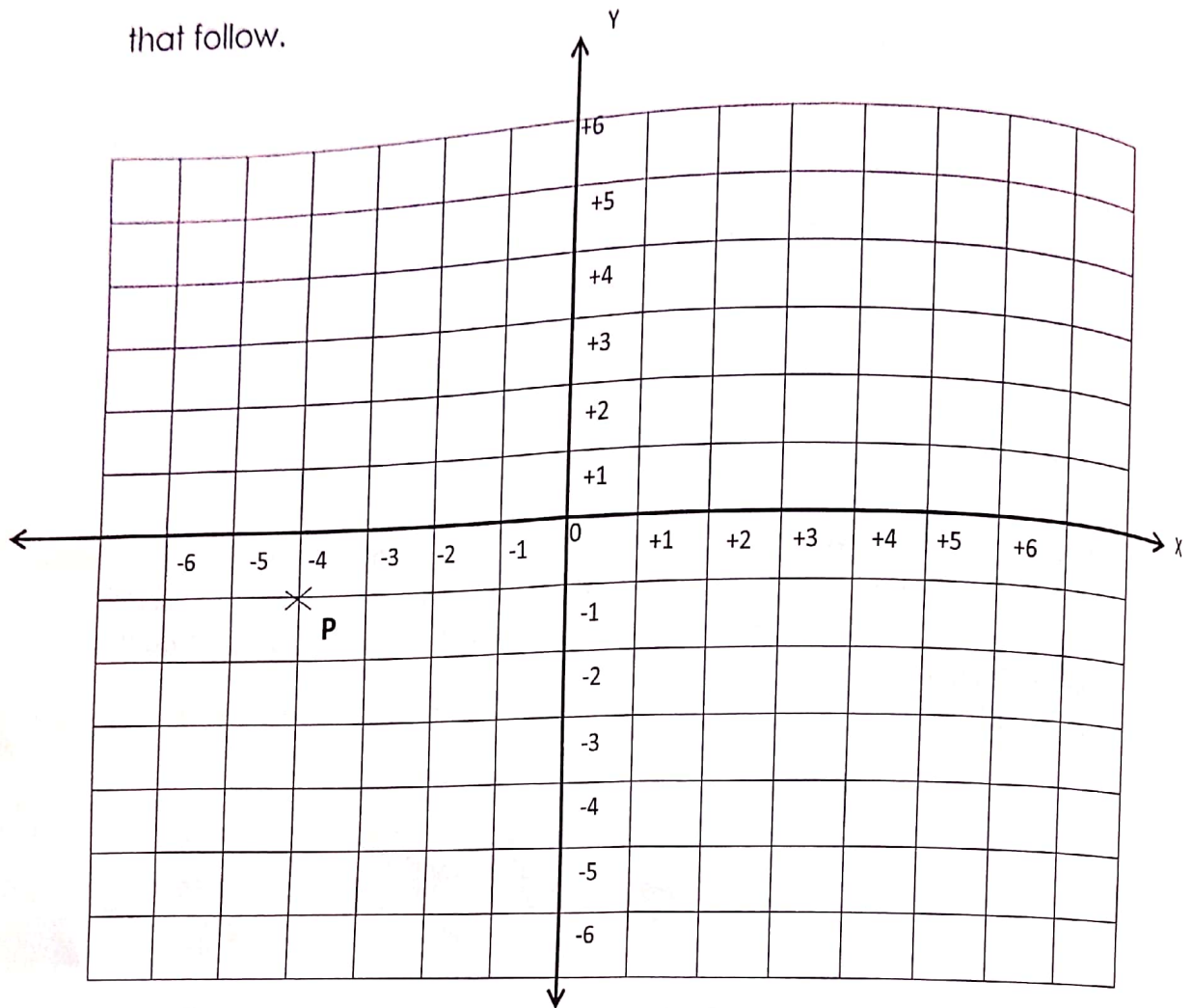
a) Write the coordinates of point P   (1mark)

b) Plot the points Q (-2 +2) and R (+4 , -1) on the graph.(2marks)

c) Join the point P to Q and Q to R   (1mark)

d) Locate a point S on the graph, join it to P and R such that PQRS is a kite.
                                                        (1 mark)

Turn Over

31. The table shows the rate at which different currencies are bought and sold in a forex bureau use it to answer the questions that follow.

Currency	Buying (Ug sh)	Selling (Ug sh)
1 US ($)	3680	3750
1 EURO	4200	4250

a) How many Euros did Ellen get for Ug. Sh . 1,147,500 ? (2marks)

b) Musa had 95 dollars . How much money did he get in Uganda shillings? (2marks)

END