OUTREACH SCHOOLS EXAMINATIONS BOARD
PRE-MOCK SERIES III
2024
MATHEMATICS
Time Allowed: 2hours 30 Minutes

Random No.						Personal No.		

Candidate's Name: ....

Candidate's Signature: ....

School Name: ....

District No: ☐ ☐ ☐ ☐

Read the following instructions carefully:

1. This paper has two sections: **A** and **B**

2. Section **A** has 20 short questions (40 marks)

3. Section **B** has 12 questions (60 marks)

4. Answer all questions. All the working for both sections A and B must be shown in the spaces provided.

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

6. Unnecessary changes in your work and handwriting that cannot be easily read may lead to loss of marks.

7. Do not fill anything in the table indicated

   "For examiners' use only" and the boxes

   inside the question paper.

OUTREACH SERVICES **KAMPALA-(U)**

((((OUTREACH SCHOOLS EXAMINATIONS BOARD(OSEB)-KAMPALA))))
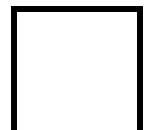LOCATED AT **6MILES GAYAZA ROAD-KLA**   (*QUALITY SERIES 3/6*)
TEL: 0742845900 / 0774787978

1. Reduce 4 by ½

2. List all the subsets in se P = { m, e, n }

3. Find the next number in the sequence;

   2, 3, 5, 8, 13, 21, _____

4. Using a pair of compasses construct an angle of 15°.

5. Ameka covered a distance of (w +20) km in only 1 hour 45 min.

   Calculate his speed.

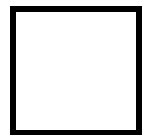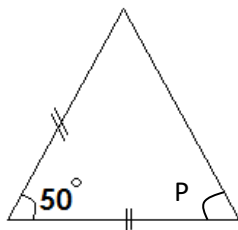6. Work out: (0.78 x 93) + (7 x 0.7) using distributive property.

7. A minute hand of a clock moved 36 minutes, what angle size did it cover?
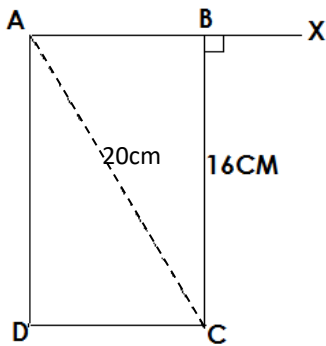
8. Express 19 in roman numerals.

9. Solve: $\dfrac{2y}{3} - 3 \leq 5$

10. Work out the value of p in the figure below.

50°   P

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┌──┐
│  │
│  │
└──┘
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11. Work out the area of the figure below; Given that $\overline{BC}$ = 16cm. $\overline{AC}$ = 20cm.

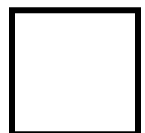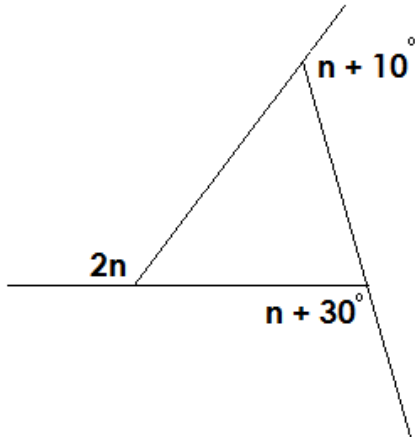   ∟CBX = 90°

12. Simplify; $4a^{-2}$ x $3a^3$

13. Find the sum of the LCM of 6 and 8 and their L.C.F.

14. Calculate the simple interest on sh. 200,000 at 3% p.m from 1st January to 30th May, 2024.

15. In a class of 72 pupils, x% are absent. Find the value of x if 63 pupils are present.

16. Use the figure below to find the value of n.

17. At a forex bureau the exchange rate is 1 pound for sh. 3200. How many pounds will a trader get for sh. 3,840,000?

18. A farmer's piece of land 20 m long by 12m wide, is to be fenced with posts spaced 2m apart. What will be total cost of the posts if each of them costs. Sh. 2000?
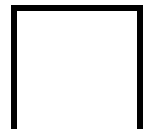
19. The figure shows a cube. If its total surface area is 384 cm^2.

Find the lengthy of each side.
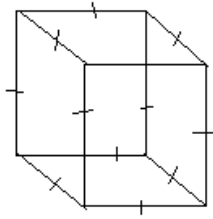
20. At a concert there were ½ as many adults as there were children. If there were 120 people altogether, how many children attended the concert?

SECTION B : 60 MARKS

Answer all the questions in this section

Marks for each question are indicated in brackets.

21. a) The total number of red and blue pens is 12. If the probability of picking a blue pen is two thirds. How many red pens are in the box?   (1mk)
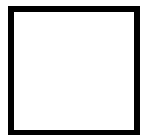
b) The price of a basin was increased by 20%. Calculate the old price if the new price is sh. 12000? (2mks)

c) A dozen of books cost sh. 1700. How many dozens will Apio buy with 850,00/= (2mks)

22. Omondi went to a local market and bought the following items;

3 tins of blue band for sh. 3000
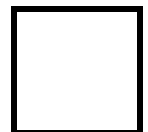
32 bananas at sh. 800 for 4

500gm of tea leaves at sh. 800 per kg

2 ½ litres of paraffin at sh. 2400 each

4 heaps of tomatoes worth sh. 2000.

How much money did he carry with him if he was given a change of sh. 3600? (6mks)
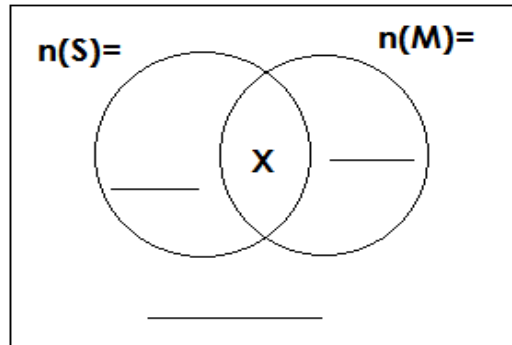
23. In a primary seven class of 50 pupils, 27 like Maths (M) 22 like science (S)

x like both Maths and Science and 3 do not like any of the two subjects.
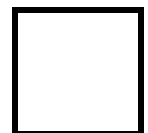
a) Complete the Venn diagram. (3mks)

b) Find x

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n(S)=                n(M)=


    (    ( X )    )
     ___       ___


        _____
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c) Work out the number of pupils who like one subject only. (1mk)

24. A milk seller in Nyeko village has 36 litres of milk. He sells using a container that measure 6cm by 10cm by 6cm at sh. 500 a full container. How much money will he get after selling all the milk? (5mks)

25. Elizabeth scored the following marks in her homework exercise;
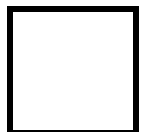
7, 5, 3, 10, 4, 7, 6, 8, 3

a) Find her median mark.   (2mks)

b) Find the mean mark.   (2mks)

c) Workout the probability that Elizabeth scored a mark below her mean mark.

(2mks)

26. A tank is $^3/_5$ of petrol, when ¼ of that petrol was sold, only 7200 litres remained in the tank. How many litres of petrol does the tank contain when it is $^5/_8$ full.   (5mks)

27. a) Change 11010_{two} to decimal base. (1mk)

b) Work out the square root of 0.81 (2mks)

c) The bearing of A from B is 250°. What is the bearing of B from A? (1mk)

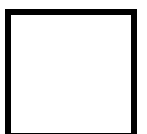28. a) Solve; $\frac{1}{2}$ x -3 = x +1 (2mks)

b) The mean of 3, 5, 7, (x + 1), 7, 2 is x, workout the value of x. (3mks)
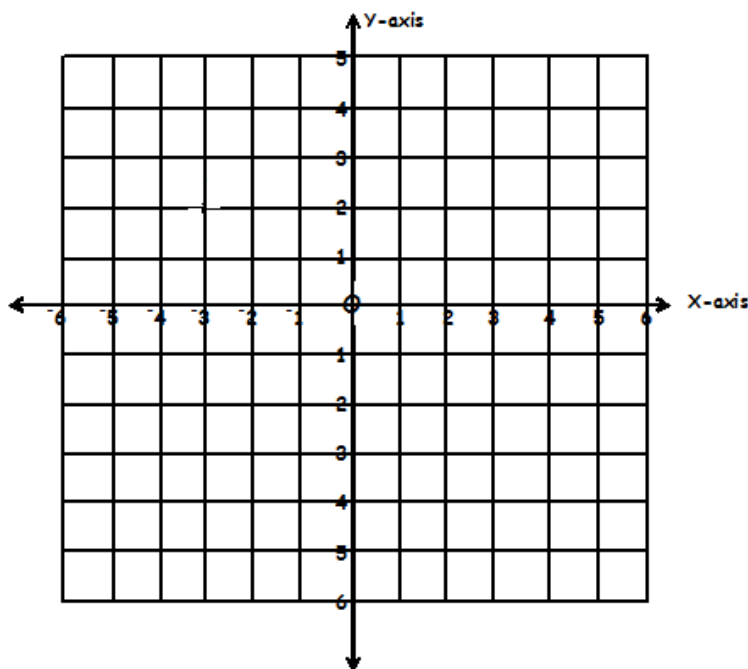
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29. A lorry travelled at a speed of 45km/hr for 3 hours and realized that they would reach late and changed the speed to 75km/hr for only 2 hours before it reached the last destination. Calculate the average speed for the whole journey.

(5mks)

30. On the grid below plot the following points.
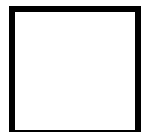
A(-2, +2), B(+1, +2),   C(+2, -1)   D(-2, -1)   (4mks)
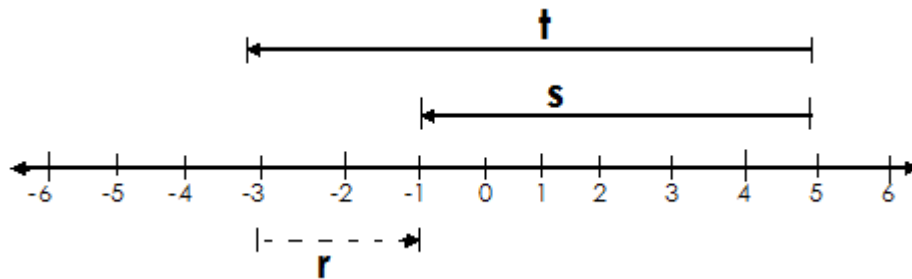

b)   Join the points to find the size of the figure formed.   (2mks)

31. Use the number line below to answer the questions that follow.

a) Find the value of   (1mk each)

   (i) s =   (ii) t =   (iii) r =

   b) Write the mathematical statement represented.   (1mk)

32.   A farmer planted different crops on his land as follow;

       Maize $^2/_5$ of the land

        Beans $^1/_3$ of the land

       ½ as much as the Maize land with peas

       Elephant grass on the rest of the land.

       Draw a pie chart of radius 4.5 cm to represent the above information.

                                                                       (5mks)

END