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MUGWANYA PREPARATORY SCHOOL, KABOJJA
PRE P.L.E (Set I) EXAMINATION, 2023
MATHEMATICS

Time Allowed: 2 hours 30 minutes

Index No.

	Random No.					Personal No.		

Candidate's Name: ....

Candidate's Signature: ....

School Random No. : ....

District ID:...

FOR EXAMINER'S USE ONLY

Read the following instructions carefully:

Do not write your school or district name anywhere on this paper

1. The paper has **two** Sections: **A** and **B**.

2. Section **A**, 20 questions (40 marks)

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

4. Answer **ALL** questions. All answers to both Sections A and B Must be written in the spaces provided.

5. All answers must be written using a blue or black ball-point Pen or ink. Diagrams should be drawn in pencil.

6. Unnecessary alteration of work may lead to loss of marks.

7. Any handwriting that cannot easily be read may lead to loss of Marks.

8. Do not fill anything in the box indicated for examiner's use only.

FOR EXAMINER'S USE ONLY		
QN. No.	MARK	SIGN
1 - 10		
11 - 20		
21 - 30		
21 - 30		
31 - 32		
TOTAL		

1. Work out: 21 – 0

2. Write 43.094 in words.

3. Given that A = {all cube numbers less than 10}   Find n(A).

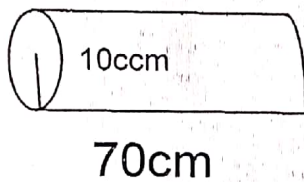4. Find the square of the next number in the sequence:
   3, 5, 4, 6, 5, 7, ___.

5. Express 0.1222…..as a vulgar fraction.

6. The average mass of a teacher and two pupils is 44kg.
   The mass of the two pupils are 38kg and 36kg respectively.
   Find the mass of the teacher.

8. A man deposited twenty thousand shilling notes numbered consecutively from BW74651 to BW7424671.
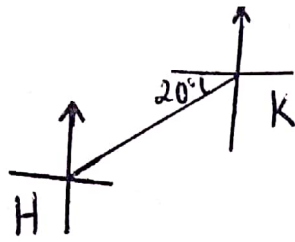   How much money did he deposit?

9. Calculate the volume of the figure below. (Use $\pi = \frac{22}{7}$)

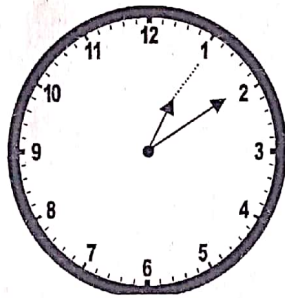
   10ccm

   70cm

10. Solve for p: $5 - 2 (p - 3) = 9$

11. Work out: $2 \div 3 = $ (mod 5)

12. Find the bearing of k from H in the figure below.

13. Find the maximum number of people who can share 12 or 20 mangoes without leaving a remainder.

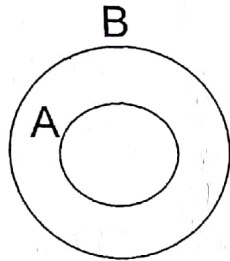14. A lesson that took $2\frac{2}{3}$ hours ended at the time shown on the clock face below.
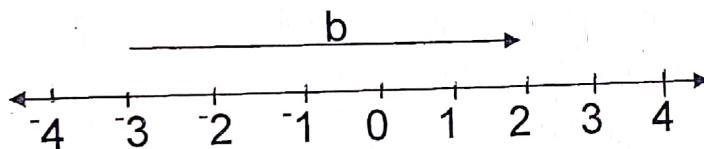

At what time did the lesson start?

15. Using a ruler, a pencil and a pair of compasses only construct 22.5^0

16. The ratio of boys to girls in the class is 2:3.
Write the fraction of boys as a decimal

17. Shade set B in the Venn diagram below.

B

A

18. Write the integer represented by arrow b.

b

$$\xleftarrow{\hspace{1cm}} \;{}^-4 \quad {}^-3 \quad {}^-2 \quad {}^-1 \quad 0 \quad 1 \quad 2 \quad 3 \quad 4 \; \xrightarrow{\hspace{1cm}}$$

b= _____
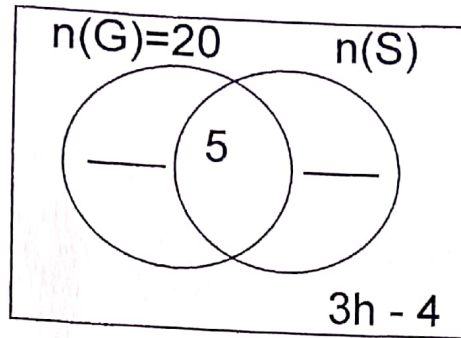
19. A wire of length 36 metres was used to form a square prism.
Calculate the total surface area of the prism.

20. What percentage of 5km is 200m?

21. In the Venn diagram below, 20 farmers keep goats (G), h keep sheep only(S), 5 keep both and 3h − 4 do not keep any of the two.

(a)Complete the Venn diagram. (2 marks)

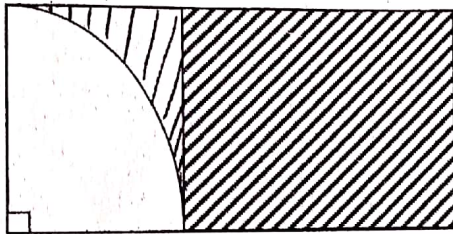(b) If 56 farmers keep neither of the two, find the value of h. (2 marks)

22. The sum of three consecutive counting numbers is 72. If the largest is y,
(a) Find the value of y (3 marks)

(b) Find the average of the numbers. (2 marks)

23. Sam left Kampala for Masindi which is 330km away driving at a steady speed of 70km/h. Two hours later, he took a break of 50 minutes. At what speed must he drive in order to reach Masindi at 2:00p.m? (5 marks)

24. Use the diagram below to answer the questions.
BE =6dm, CB = 22dm.

(a)work out the length of OB. (2 marks)

(b) Calculate the area of the shaded part. (4 marks)

25. The cost of a door is twice as much as a window. A table costs sh. 15,000 less than a door. All the three items cost sh. 180,000. Find the cost of each item. (5 marks)

26. Joseph, Lambert and Alpha shared some money in the ratio 5:9:4 respectively.
(a)If Lambert got sh. 1800, how much money did Joseph get? (3 marks)

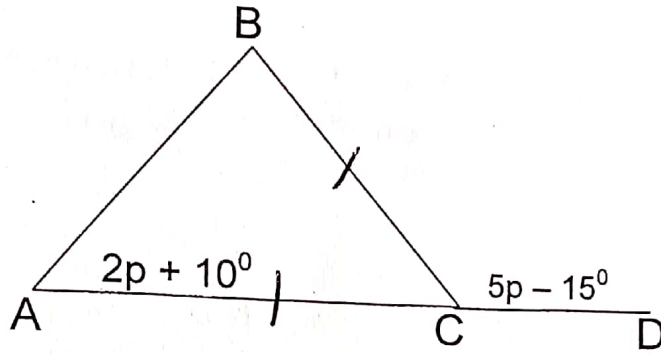(b) How much more did Lambert get than Jim? (2 marks)

27(a) Sanduku takes 20 minutes to sweep the classroom. Buluma takes 30 minutes to sweep the same classroom. If both agree to work together, how long do they take to sweep the same classroom? (2 marks)

(b) Work out: $\dfrac{0.75 + 0.25}{0.65 - 0.4}$

(3 marks)

28. Study the figure below.

(a)Find the value of p.   (3 marks)

(b) Find the size of ACB.   (3 marks)

29(a) Round off 3.6981 to the nearest hundredth. (2 marks)

(b) Write four hundred ninety six in Roman numerals. (2 marks)

30. The table below shows the prices of different currencies at a forex bureau. Study it and answer the questions that follow.

Curency	Buying in Ug. Sh.	Selling in Ug. Sh.
1 Us dollar	Ug sh. 3650	Ug sh. 3700
1 Euro	Ug sh. 4,000	Sh. 4020

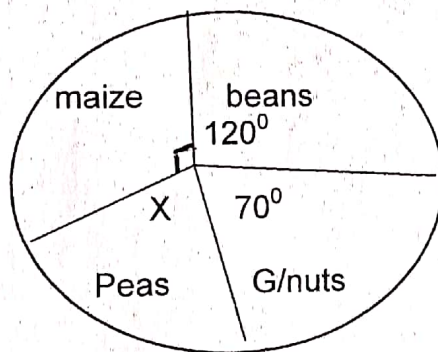(a) Musawo Sharon 250 Us dollars.
How much money in Uganda shillings did she get?   (2 marks)

(b) If Paul had 5550 Euros, how many dollars did he get? (3 marks)

31. Using a pair of compasses, a ruler and a pencil only construct a quadrilateral. ABCD where AB = CD = 7cm and AD = 5cm. (4 marks)

(b) Measure angle BAC (1 mark)

32. The pie-chart shows how a farmer uses his garden.

(a) Find the value of x. (2 marks)

(b) If he uses 8 acres for growing peas, find the size of his land. (3 marks)