UNEB BLUE PRINT 2023

MATHEMATICS (SET SIX)
Time allowed: 2 Hours 30 Minutes

Index no:

Random No						Personal No		

Candidate's name: ………………………………………………

Candidate's signature: ………………………………………………

School: ………………………….…………………………

District:………………………………………….……

Read the following instructions carefully

1. This paper is made up of two sections: **A** and **B**.
2. Section **A** has **20** questions **(40 marks).**
3. Section **B** has **12** questions **(60 marks).**
4. Answer ALL questions in both sections **A** and **B.**
5. All answers **MUST** be written in the space provided In blue or black ball point pens or ink. All diagrams Should be in pencil.
6. Unnecessary crossing of answers will lead to loss of Marks.
7. Poor hand writing which cannot be easily read, May lead to loss of marks.

1. Subtract: 24 − 12

2. Work out 3 − 5 = _____ (finite 7)

3. Fill in the missing number.
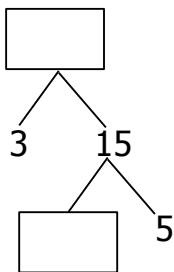
4. Express $\frac{1}{4}$ a decimal in its lowest form.

5. Solve 2p − 8 = 16

6. Given that set Q has 31 proper subsets. How many elements are in set Q?

7. Use distributive property to work out.
   $(4.5 \times 16) - (6 \times 4.5)$

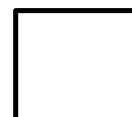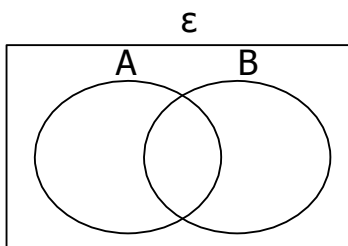8. Express 54km/hr in m/sec.

9. Jack tossed a die once. What is the probability that he found a triangular number showing up?

10. David sold a radio at sh. 45000 making a loss of sh. 5000. What was his percentage loss?

11. In the figure below, find the value of p.

$2p + 20^0$

$2p$
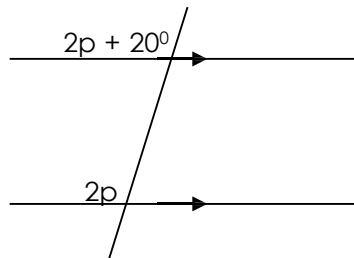
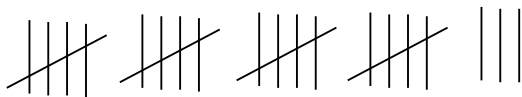12. On the Venn diagram below, shade $(B - A)^I$

ε

A   B

13. Simplify 4q – (3q – 2) + 5

14. Express 600g as a ratio of 1.2kg.

15. The cost of $\frac{2}{3}$ kg of millet flour is sh. 3000. What is the cost of 3 kg of millet flour?

16. How many right angles are in a regular Hexagon?

17. The number of boys in P.7 Bright is counted as shown below;
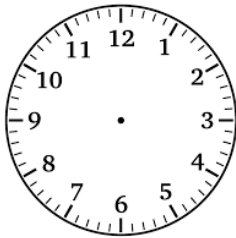

How many boys are in P.7 Bright?

18. Amukaga deposited sh. 100000 in a bank that offers an interest rate of 5% p.a for a period of 2 years. How much interest did she get after the 2 years?

19. Using a pair of compasses, a ruler and a pencil, construct an angle of 75^0 in the space provided below.

20. Show "Half past 3" on the clock face below.

SECTION B: 60 MARKS

Answer **all** the questions in this Section

Marks for each question are indicated in brackets

21. Ben, Betty and Brenda shared some money in the ratio of 2:5:3 respectively. Betty got sh. 500000.
    a) How much money did they share altogether?   **(2 marks)**

    b) How much more money did Brenda get than Ben?   **(2 marks)**
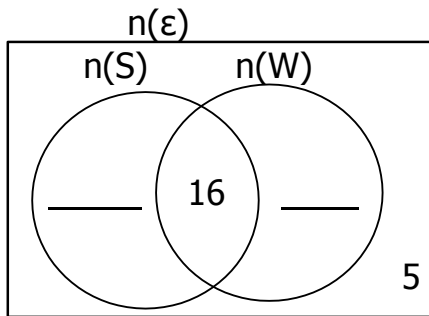
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c) What percentage of the money did Brenda get?   **(1 mark)**

22. In a certain group meeting (2m − 5) people took soda (S) only, (m + 10) people took water (W), 16 people took both water and soda while 5 of them did not take any of the drinks.
   a) Use the information given above to complete the Venn diagram.
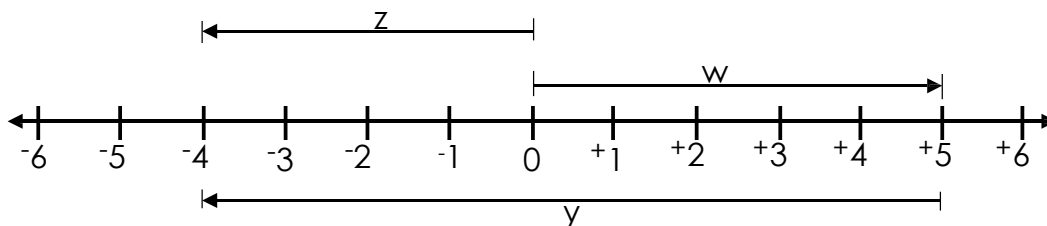   **(2 marks)**

n(ε)
n(S)   n(W)

___   16   ___

5

b) Given that 34 people took only one type of drink. Find the value of m.
                                                        (2 marks)

c) How many people attended the meeting altogether?   **(2 marks)**

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

$$
\begin{array}{cccccccccccccc}
-6 & -5 & -4 & -3 & -2 & -1 & 0 & +1 & +2 & +3 & +4 & +5 & +6
\end{array}
$$

a) Identify the integers marked with the letters.

z = _____,   y = _____,   w = _____
                                                        (3 marks)

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b) Write the mathematical statement shown on the number line.

(1 mark)

24. Belinda went to the shop and bought the items as follows.
    6 litres of milk at sh. 2000 each litre.
    1½ kg of sugar at sh. 3000 per kg
    250g of blue band at sh. 2500
    3 loaves of bread at sh. 2500 each loaf.
    If she was given a discount of 10%, work out her total expenditure.

(5 marks)

25. a) Simplify: $\dfrac{0.48 \times 0.6}{0.4 \times 0.2}$ **(3 marks)**

b) In a class, $\frac{2}{5}$ of the pupils are boys and the rest are girls. If there are 24 more girls than boys. How many pupils are in the class altogether?

(3 marks)

26. a) Using a pair of compasses, a ruler and a pencil, construct triangle KLM
such that KL = ML = 6cm and KLM = 60^0.   **(4 marks)**

b) What special name is given to the triangle constructed in (a) above?
(2 marks)

27. a) Given that the median of 4x and 6x is 20. Find the value of x.
(2 marks)

b) If represents 6 balls. How many balls are represented by

   ?   **(2 marks)**

28. The size of each interior angle of a regular polygon is 120^0.
   a) Name the polygon.   **(3 marks)**

   b) Find the interior angle sum of the polygon.   **(2 marks)**

29. During end of year concert held at the theatre, the theatre had   60 rows
   with 22 chairs each. The children occupied 35 front rows and the rest were
   occupied by adults.
   a) How many people were in the theatre?   **(2 marks)**

   b) If each adult paid 15000 and children sh. 5000 as entry fee, how much
   money was collected altogether?   **(3 marks)**

30. a) Given that F_{36} = {2_1, 2_2, 3_1, y}. Find the value of y.   **(2 marks)**

b) The sum of five consecutive integers is zero (0). List down the integers. If the greatest of all is p. **(3 marks)**

31. The table below shows the rates at which a bank buys and sells foreign currency. Use it to answer the questions that follow.

Currency	Buying rates	Selling rates
Kenya shilling (K.sh)	Ug sh. 35	Ug sh. 36
Us dollars (Us$)	Ug sh. 3600	Ug. sh. 3700
British pound (£)	Ug sh. 4000	Ug. sh. 4200

a) Jack had Ugsh. 7200000 which he exchanged for Kenya shilling. How much money in Kenya shilling did he get? **(2 marks)**

b) A trader had Us $ 700 which he wanted to exchange for British pound (£) and the bank. How many British pound (£) did he get?

(3 marks)

32. A motorist travelled from Kampala to Mbarara and then back to Kampala as shown on the graph below.
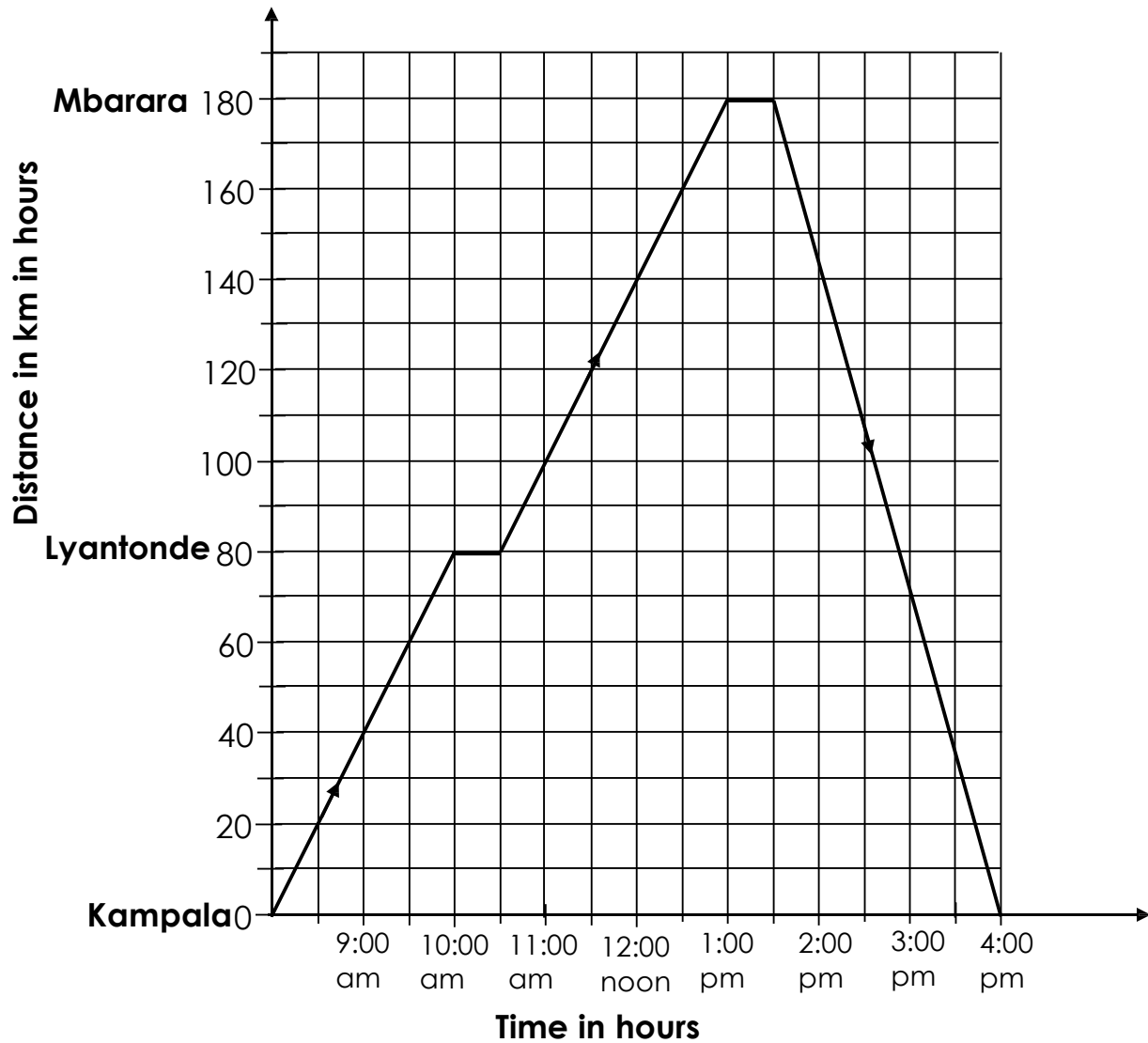
a) What is the vertical scale on the graph? **(1 mark)**

b) At what time did the motorist reach Lyatonde? **(1 mark)**

c) Calculate the motorist's average speed from Mbarara to Kampala.

(2 marks)

END

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