



UNEBS BLUE PRINT 2023

MATHEMATICS (SET THREE)

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.

FOR EXAMINERS' USE ONLY		
Qn.No	MARKS	SIGN
1-10		
11-20		
21-22		
23-24		
25-26		
27-28		
29 - 30		
31 - 32		
TOTAL		

SECTION A (40 MARKS)

1. Workout: $56 - 24$

2. Given the number 3046.84, complete the table below.

Place value	Thousands	
Value		0.04

3. The sum of two numbers is x . The first number is 45. If the second number is $\frac{2}{3}$ of the first number, find the value of x

4. The distance round a circular is 88 meters. Find the radius of the garden.
(use π as $\frac{22}{7}$).

5. Find the missing number in the operation: $3^3 \times \underline{\hspace{2cm}} = 3^5$

6. A shopkeeper sold 50kg of maize flour in a week. This was $\frac{1}{2}$ of a full sack of maize flour. How many kilograms does a full sack carry?

7. Round off 41957 to the nearest thousands.

8. How many lines of folding symmetry does the figure below have?



9. A boy fetched 60 litres of water in the morning and 72 litres in the evening. Find the capacity of the biggest container the boy used in both instances.

10. Express 00 43 hours in the 12 hour clock format.

11. 45 out of 75 learners in P.6 got above the pass mark in a Mathematics Examination. Which percentage of the class scored above the pass mark?

12. 8 builders take 10 days to complete a house. How many builders are needed to complete the house in 5 days?

13. An athlete ran 600 metres in 1 minute. Calculate his speed in metres per second.
14. Write an algebraic expression: Add 7 to m , then double the result.
15. Find the next number in the sequence: 0.1, 0.4, 0.7, 1.0, _____
16. The bearing of a teacher's home from school is 075° . Find the bearing of the school from the teacher's home.
17. Using a pair of compasses, a pencil and a ruler only, construct an angle of 255° .

18. At birth, Darwin weighed 3.27kg. How many grams did Darwin weigh?

19. Workout: $-8 - -5$

20. Given that $m = 3.2$, $n = 2$, evaluate $5m - n$

SECTION B (60MARKS)

21. The perimeter of a rectangular garden is 280 meters. The ratio of its length to its width is 5:2 respectively. Find the area of the rectangle. (4mks)

22.a). Father is 20 years older than his son. In 10 years, father will be twice as old as the son. How old is the son?(4mks)

b). Find the father's age in 10 years. (2mks)

23.The interior angles of a pentagon are: $(k + 15^\circ)$, $(2k + 13^\circ)$, $(3k + 12^\circ)$, $(4k + 10^\circ)$ and 80° . Find the value of k. (4mks)

24. Complete the table showing bases, heights and areas of the different triangles. (6mks)

Base, b	Height, h	Area, A
5cm	12cm	
	8m	24m ²
		21cm ²

25.a). Given that Set P = {2, 3, 4, 5, 6, 7, 8, 9, 10}, Q = {2, 5, 7} and R = {3, 5, 7, 9}.
What is the relationship between Sets P and R? (1mk)

b). List the elements of the set $(Q' \cup P')$. (2Mks)

26. A rectangular container has length of 6m. Height of 4m and surface area of 148m^2 . Find its length. (4mks)

27. Find the base three numeral that is equivalent to 123_{five} . (4mks)

28.i). Given that $(P - Q) = \{23\}$, $(Q - P) = \{32, 33\}$ and $(Q \boxtimes P) = \{21, 22, 31\}$
Find the value of P. (2mks)

ii). Find the value of Q. (2mk).

iii). Work out the LCM of P and Q.

(2mks)

29. In a class of 60 pupils, the mean mark in a test was 65 for the girls and 50 for the boys. If there were 25 girls in the class, find the mean mark for the class in the test. (6mks)

30. The capacities of two similar bottles are 300ml and 8100ml. If the height of the larger bottle is 12cm. Find the height of the smaller one. (4mks)

31. A mother earns Shs600,000 per month. She spends Shs380,000 on family needs and uses the rest to pay school fees for the three children in the ratio 6:2:3 respectively. How much money is spent on each child's fees per month? (7mks)

32. The marked price of an item in a shop is 100,000. Martin was asked to make a deposit of Shs120,000 and pay the rest in 5 monthly instalments of 20% of down payment. How much less money did Martin buy the item if he paid cash? (6mks)