# OUTREACH SCHOOLS EXAMINATIONS BOARD

## P. 7 EXAMINATION SET 8 ,2023

## Mathematics.

***Time allowed 2hrs:15mins***

| INDEX NUMBER | | | | | | | | | |
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**NAME:** _____

Signature: _____

Stream _____

Date _____

FOR EXAMINER'S USE ONLY

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| A | |
| B | |
| TOTAL | |

**Read the following instructions carefully:**

1. **This paper is made up of section A and B.**
2. **Section A has 20 short answer questions (40 marks).**
3. **Section B has 12 questions (60 marks).**
4. **All answers to both section A and B must be written in the spaces provided.**
5. **All answers must be written in blue ink and diagrams should be drawn in pencil.**
6. **Any handwriting that cannot easily be read will lead to loss of marks.**
7. **Unnecessary alteration of work may lead to loss of marks.**
8. **No calculators are allowed in the examination room.**

| TEACHER'S COMMENT | |
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| SIGNATURE | |
| Date: | |

## SECTION A:40 MARKS

### *Questions 1 to 20 carry two marks each*

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| 1. | Add: 363 + 37 | 2. | Simplify: 3k – 2y – k + 4y |
| 3. | Arrange -4, 3, 0, -2, 1 in ascending order. | 4. | Find the LCM of 9 and 12. |
| 5. | The area of a triangle is $36m^2$. If its base is 6m, find its height. | 6. | What number has been expanded to give $(5x10^2) + (4x10^0) + (7x10^{-2})$? |
| 7. | Convert $1101_{two}$ to base ten. | 8. | $^2/_3$ of Oumar's salary is sh.600,00. Find his total salary. |
| 9. | Round off 79.63 to the nearest whole number. | 10. | If a = -6 and b = 5, find the value of $a^2 + b$ |

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| 11. | Using a pair of compasses, ruler and a pencil, construct an angle of $120^0$. | 12. | Solve: $9 - 3y = 30$ |
| 13. | What is 25% of 1800 mangoes? | 14. | Find the sum of the next two numbers in the sequence;<br><br>2, 3, 5, 7, _____, _____ |
| 15. | Write XLIX in words. | 16. | The cost of 3 books is sh.2400. what is the cost of 10 similar books? |
| 17. | The average of 5, 6 and 3 is 7. Find the value of x. | 18. | Work out: $2 - 3 =$ _____ (mod 6) |
| 19. | Using distributive property, work out: (34 x 8) + (66 x 8) | 20. | How many elements are in a set with 127 proper subsets? |

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| **SECTION B: (60 MARKS)** | | | |
| 21. | a) Simplify: $^{2}/_{3} - ¼ + {}^{1}/_{3}$ (2mks)<br><br>b) Work out: $\frac{0.12 \times 0.8}{0.2 \times 0.4}$ (3mks) | 22. | Ruth went shopping and bought the following items.<br>2kg of meat at sh.8000 @kg<br>1 ½ kg of sugar at sh.4000 per kg<br>3 bars of soap at sh.2200 each bar<br>a) What was her expenditure? (4mks)<br><br>b) If she remained with sh.1400, how much did she have before? (1mk) |
| 23. | In trust Primary School, there are 420 pupils and of these, $^{3}/_{7}$ are boys.<br>a) What fraction are girls? (2mks)<br><br>b) How many more girls are there in the school than boys? (3mks) | | |

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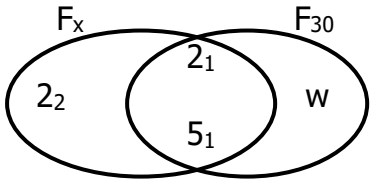
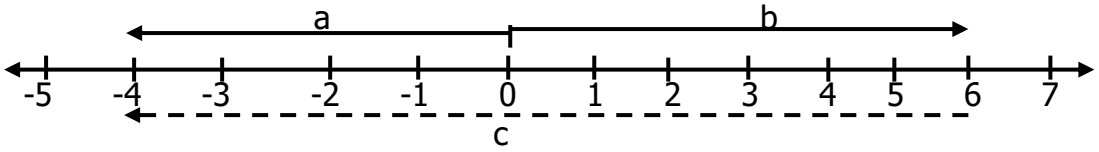
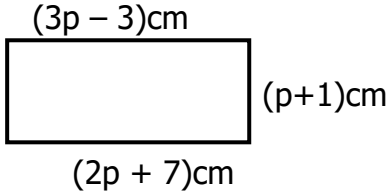
| 24. | Study the Venn diagram below and answer the questions that follow.<br>  <br><br>a) Find the GCF of x and 30. (2mks)<br><br>b) Work out the LCM of x and 30. (3mks) |
| 25. | Joan scored as follows: 40, 70, 50, 82, 48, 70<br>a) Work out the median mark. (2mks)<br><br>b) Calculate the mean mark. (3mks) |
| 26. | Study the number line below and answer the questions that follow;<br>  <br><br>a) Identify the integers represented by letter;<br>i) a _____ |

ii) b _____

iii) c _____

b) Write the mathematical statement shown on the above number line. (1mk)

27. The figure below is a rectangle. Use it to answer questions that follow.

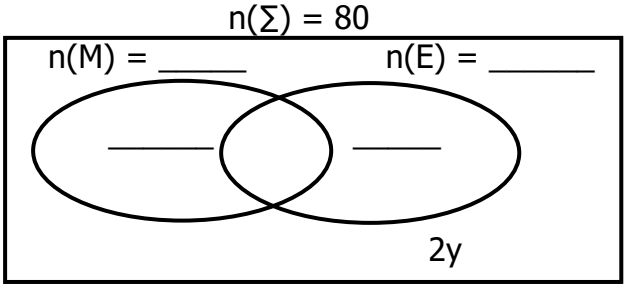



a) Solve for p. (2mks)

b) Calculate the area of the figure above. (3mks)

28. In a class of 80 pupils, 37 like maths (M), 31 like English (E), 8 pupils like both subjects and 2y pupils like any of the two.

a) Complete the Venn diagram below using the above information. (3mks)




b) Find the value of y. (3mks)

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| 29. | Opolot shared sh.120,000 among his three children Tim, tam and Tom in the ratio of 3:5:4 respectively.<br>a) How much money did each get? (4mks)<br><br>b) How much more money did Tam get than Tim? (1mk) |
| 30. | a) Using a ruler, a pencil and a pair of compasses, construct a regular quadrilateral ABCD in a circle of radius 4cm. (4mks) |

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| | b) Measure line AB (1mk) |
| 31. | a) A man bought 25 apples at sh.800 each. At what price must he sell each apple to realize a 20% again? (4mks)<br><br>b) Express 22½% as a decimal (1mk) |
| 32. | A tank was 2/3 full of water. When ¼ of the water in the tank was drawn, 2,500 litres remained. Find the capacity of the tank when full. (5mks) |

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**End**