# KOLFRAM EDUCATIONAL SERVICES KAMPALA

THE KOLFRAM EXAMINATIONS BOARD

## PRE MOCK SET VII EXAMINATION 2023

## MATHEMATICS

*Time allowed:* ***2*** *hours* ***30*** *minutes*

| **Index Number:** | **Random Number** | | | | | | **Personal Number** | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

**Candidate's Name:**.....

**Candidate's Signature:**.....

**School Name:** .....

**District Name:**.....

**DO NOT OPEN THIS BOOKLET UNLESS YOU ARE TOLD TO DO SO**

**Read and follow these instructions carefully:**

1. This paper has **two** sections: **A** and **B**. Section A has **20** questions and section B has **12** questions. The paper has **10** printed pages.
2. Answer all questions. **All** answers to both sections **A** and **B** must be shown in the spaces provided.
3. All answers must be written using a **blue** or **black** ball point pen or ink. Any answer written in pencils other than on graphs and diagrams will not be marked.
5. No calculators are allowed in the examination room.
6. Unnecessary changes in your work and handwriting that cannot easily be read may lead to **loss of marks**.
7. Do not fill anything in the table indicated: "**FOR EXAMINERS' USE ONLY**" and boxes inside the question paper.

| **FOR EXAMINER'S USE ONLY** | | |
|---|---|---|
| QN. NUMBER | MARKS | EXAMINER'S INITIAL |
| 1-5 | | |
| 6-10 | | |
| 11-15 | | |
| 16-20 | | |
| 21-22 | | |
| 23-24 | | |
| 25-26 | | |
| 27-28 | | |
| 29-30 | | |
| 31-32 | | |
| **TOTAL** | | |

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## SECTION A: (40 MARKS)

*(Each question carries 2 marks)*

1. Given that P = {a, e, i, o, u}. How many elements are in set P?

2. Multiply: 33 x 6

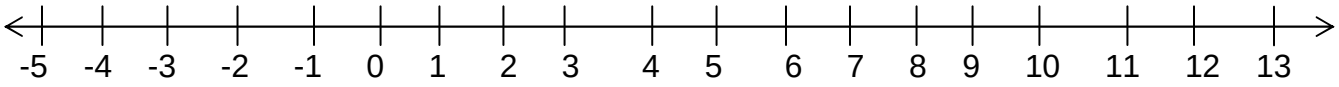
3. What number has been expanded below? 30000 + 500 + 7

4. Find the next number in the following sequence.

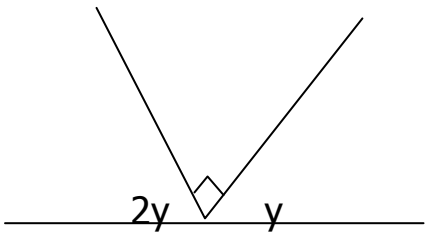
   1, 8, 27, 64, _____

5. Subtract: $\frac{2}{3} - \frac{1}{5}$

6. On the number line below show 3 x 4.




7. Find the value of y in the diagram below.




8. Subtract: $4\ 3_{five}$
   $-\ 2\ 4_{five}$

   _____

9. Write a quarter to five O'clock in the morning in figures.

10. Write in figures: Fifty five thousand fifty five.

11. Calculate the circumference of circle whose diameter is 28dm.

12. Solve: $4p - 2 = 10$

13. A parent waited at the headmaster's office from 7:30 a.m. to 9:15 a.m. For how long did the parent wait?

14. Work out: $2 - 5 =$ _____ (finite 7)

15. Find the mean of 3a, 4, a and 0.

16. 8 shirts cost sh. 120000. How many such shirts will I buy with sh. 90,000?

17. Simplify: $\frac{1}{3}(9x - 6)$

18. Using a ruler, a pencil and a pair of compasses only, bisect the line below.

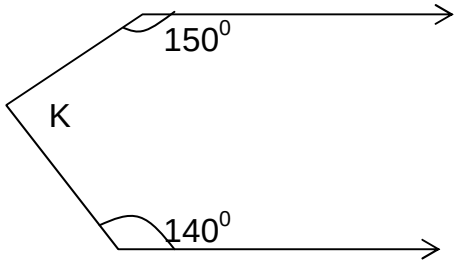


19. Kenzo's birthday party will take place next week. Find the probability that the party will take place on a day that starts with letter 'S'.

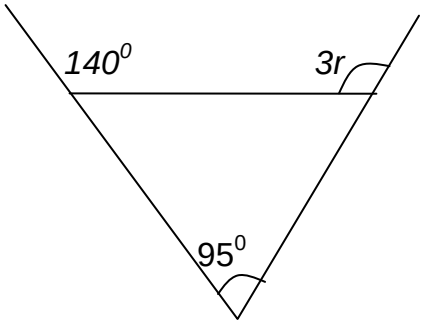
20. How many 250gm bowls of ghee can be obtained from a 10kg tin?

## SECTION B: (60 MARKS)

21a) Find the value of angle marked K in the diagram below. *(3 marks)*

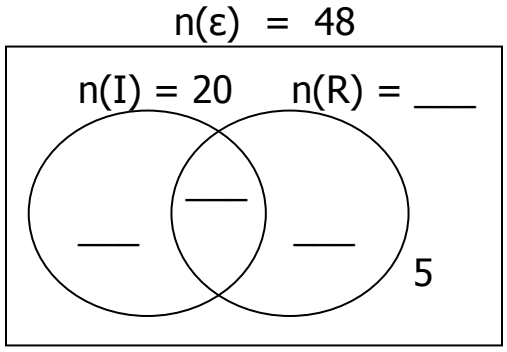


(b) Find the size of the angle marked *r*. *(2 marks)*




22. Out of the 48 guests who attended Kato's birthday party, 20 ate Irish potatoes (I) and 10 ate both Rice (R) and Irish potatoes, 5 like neither of the two types of food and Y like rice only.

(a) Complete the venn diagram below. *(1 mark each)*




(b) How many pupils like rice only? *(2 marks)*

23a) Show two hundred sixty seven on an abacus. *(1 mark)*

(b) Find the difference between place values of 4 and 2 in 48276 *(2 marks)*

(c) Expand $123_{five}$ using powers. *(1 mark)*

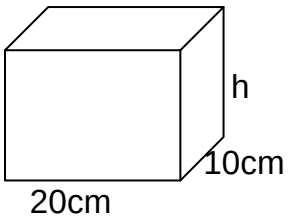
24. Isiko scored the following marks in series of tests;
70, 80, 85, 60 and 70

(a) What was his modal mark? *(1 mark)*

(b) Find the median. *(2 marks)*

(c) Work out the mean mark. *(2 marks)*

25. The volume of the rectangular tin below is 1.2 litres.




(a) Find the value of h. *(3 marks)*

(b) Find area of the base. *(2 marks)*

26. Nalwanga Teddy bought the following items from a shop.

3 kg of rice at sh. 9000

1 ½ kg of meat at sh. 8000 per kg

250gm of salt at sh. 1200 per kg

½ litre of cooking oil at sh. 4800 per litre

(a) How much money did Teddy spend altogether? *(5 marks)*

(b) She was given change of sh. 4800. How much money did she have before the shopping?

*(1 mark)*

27(a) Simplify: $\frac{0.45 - 0.4}{0.8 + 0.2}$ *(3 marks)*

(b) Express 12 ½% as a fraction in its lowest term. *(2 marks)*

28 (a) Kisomose is 3 times as old as his son. The difference between their ages is 12 years. How old is the son? *(2 marks)*

(b) Solve: $\frac{2y}{5} + 2 = 4$ *(2 marks)*

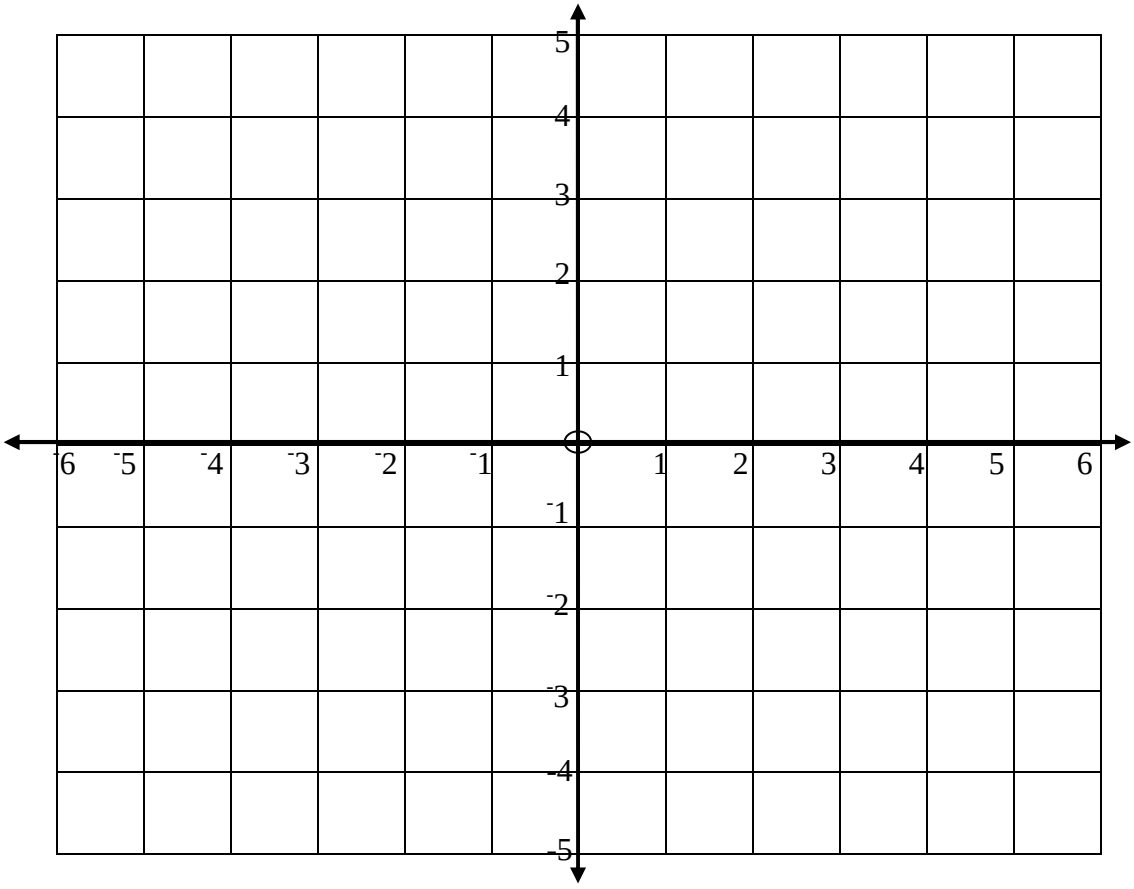
29. At Teso Junior School, two bells ring at intervals of 40 minutes and 30 minutes to change periods in upper and lower primary respectively. They first ring together at 10:30 a.m. The next ring together is at lunch time. At what time is lunch at Teso Junior School? *(4 marks)*

30. Draw a regular pentagon of side 5cm. *(5 marks)*

31 (a) Increase 500 by 20%. *(2 marks)*

(b) When 1000 is decreased by x% it becomes 900. Find the value of x. *(3 marks)*

32 (a) On the graph below, plot the vertices of a rectangle P, Q, R, S which are (-2, 3), (4, 3), (4, -1), (-2, -1) respectively. *(1 mark each)*




(b) Draw the diagonals PR and QS. *(1 mark)*

(c) Find the coordinates of the intersection of the diagonals. *(1 mark)*