# NANSANA MUNICIPALITY-WAKISO
## EDUCATION DEPARTMENT.
## SPECIAL MOCK MATHEMATICS - 2024

**DURATION : 2 HOURS 15 MINUTES**

| Random No. | | | | | | Personal No. | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

Name:.....Stream:.....

DISTRICT ID | | | | |

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.

Read the following instructions carefully

1. This paper has two Sections: A and B
2. Section A has 20 short answer questions (40 marks)
3. Section B has 12 question (60 marks).
4. Attempt ALL questions. All answers to both Section A and B Must be written in spaces provided.
5. ALL answers must be written using blue or black ballpoint or ink. Diagrams should be drawn in pencil.
6. Unnecessary alternation of work will lead to loss of marks.
7. Any handwriting that cannot be easily read may lead to loss of marks.

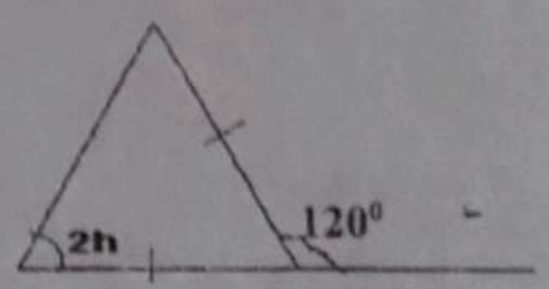
*Do not fill anything in the box indicated for examiner's use only*

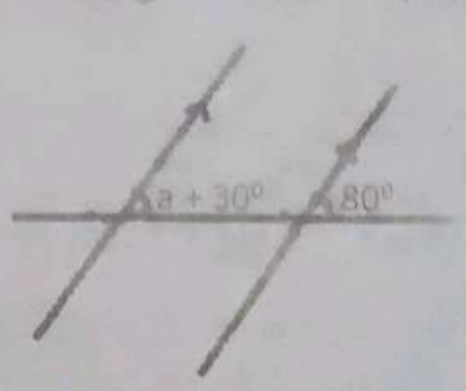
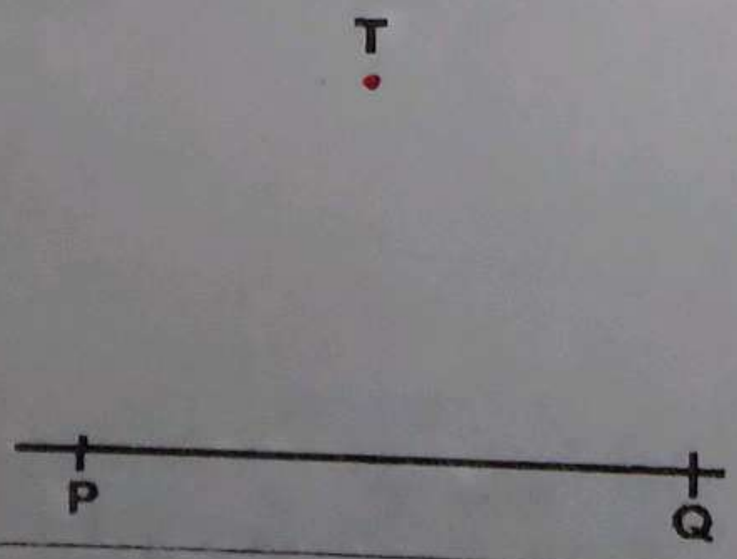
| | |
|---|---|
| A | |
| B | |
| TOTAL | |

| FOR EXAMINERS USE ONLY | | |
|---|---|---|
| QN. NO. | MARK | SIGN |
| 1 - 5 | | |
| 6 - 10 | | |
| 11 - 15 | | |
| 16 - 20 | | |
| 21 - 22 | | |
| 23 - 24 | | |
| 25 - 26 | | |
| 27 - 28 | | |
| 29 - 30 | | |
| 31 - 32 | | |
| TOTAL | | |

## PAPER II

## SECTION A (40 MARKS)

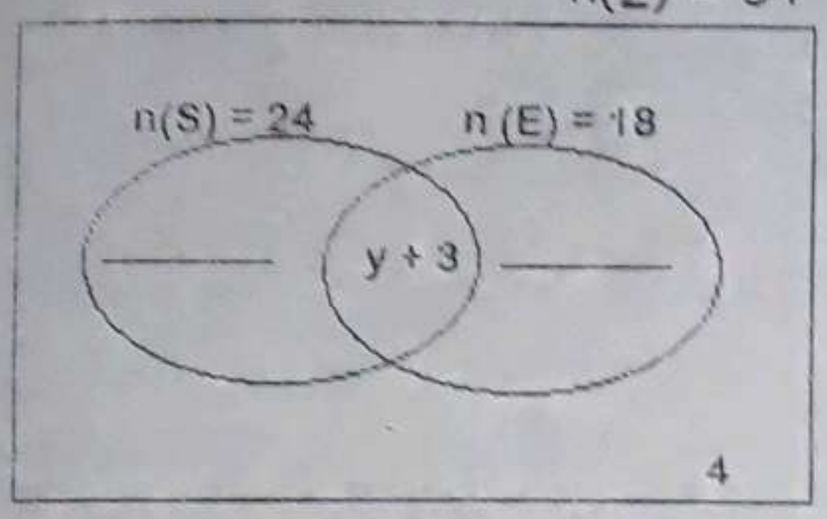
| | | | |
|---|---|---|---|
| 1. | Add: 372 + 227 | 2. | Write "Thirteen thousand, six hundred thirteen" in figures |
| 3. | Write down elements of set A of all prime numbers less than 18 | 4. | Given that a = -5, b = 4 and C=8, evaluate $\frac{ac}{b}$ |
| 5. | Write 4,764 in standard form | 6. | Convert 7.58kg into grammes |
| 7. | Work out: 6.4 ÷ 0.4 | 8. | Find the median of the following scores 9,3,7,3,5 and 6 |
| 9. | Find the HCF (Highest Common Factor) of 18 and 24. | 10. | Given that set Q has 8 subsets, how many elements does set Q have? |
| 11. | It took a bus 5 hours to reach Karuma after leaving Kampala City at 8:45am. At what time did the bus reach Karuma? | 12. | Find the value of H in the figure below.   |

| | | | |
|---|---|---|---|
| 13. | Solve: $\frac{5r}{6} + 8 = 13$ | 14. | A bicycle wheel of radius 35cm makes three complete revolution. Find the distance it will cover. (Take $\pi = \frac{22}{7}$) |
| 15. | A bag contains 7 raw mangoes and 6 ripe mangoes. A mango was picked at random from the bag, what is the probability that a bag picked is ripe? | 16. | A helicopter pilot flew at an average speed of 180km/hr from his home to the city and took 50 minutes. Find the distance he covered. |
| 17. | A lady sold three ducks at shs.81,000 making a profit of shs.21,000. If the three ducks costs the same price, find the price at which the lady bought the ducks. | 18. | In the diagram below, find the value of a.<br>  |
| 19. | Using a pair of compasses, pencil and ruler only, construct a perpendicular line from point T onto line PQ<br>  | 20. | Solve: $4 + k = 2$ (finite 5) |

## SECTION B (60 MARKS)

21. In a class of 34 candidates, 24 like Science (S), 18 like English (E) while (y + 3) candidates like both subjects. If 4 candidates like none of the subjects;

(a) Represent the above information on the venn diagram below. (02 marks)




(b) Find the value of y. (03 marks)

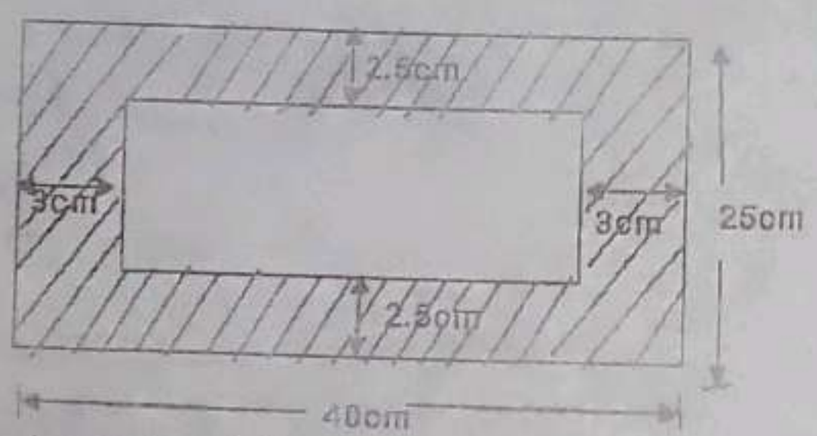
(c) If a candidate was picked at random to rub the chalk board, what is the probability that he/she likes both subjects? (01 marks)

22. The sum of three consecutive counting numbers is 96, find the three numbers. (04 marks)

23. (a) Find the value of x; if $\frac{2(x+3)}{5} = 4$ (03 marks)

(b) Solve: $4-3p \leq 13$ (02 marks)

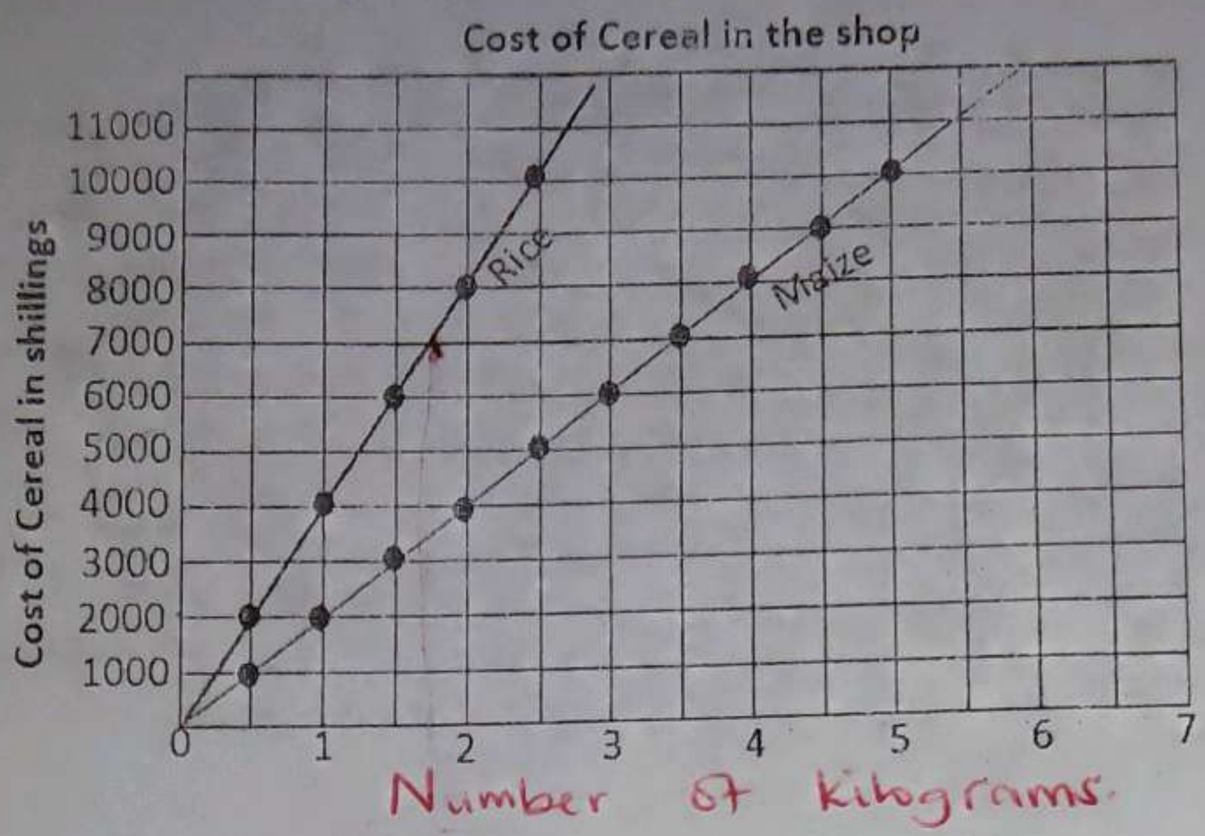
24. The Figure below represents a photograph enclosed in a photo frame. The length of the photo frame is 40cm and the width 25cm. the area not covered by the photograph is shaded. Study the figure and use it to answer the questions that follow.




(a) Find the length of the photograph. (02 marks)

(b) Calculate the area of the frame not covered by the photograph. (03 marks).

25. The graph below shows the cost of cereals in a shop. Study it and answer the questions that follow.




(a) What is the cost of 1 ½ kg of

(i) Rice? (01 marks)

(ii) Maize? (01 marks)

(b) Find the cost of 2 ½ kg of maize and 2kg of rice. (02 marks)

(c) How many kilograms of rice can one buy with shs. 7,000? (01 mark)

28. In a grocery, the cost of a water melon is shs.3000 more than that of a pumpkin. A pineapple costs two fifths the cost of a pumpkin. If the cost of all the three items is sh.33,000, find the cost of each item. (05 marks)

29.(a) Workout: $\frac{2.4 \times 1.6}{3.6-1.2}$ (03 marks)

(b) Simplify 0.48 – 2.03 + 3.6 (02 marks)

9. John went to the supermarket with a 50,000 shilling note. He bought the items as shown on the table below. After paying for all items, he remained with a change of shs. 19,300.

(a) Complete the table

| ITEM | UNIT COST | TOTAL COST |
|---|---|---|
| 2 ½ kg of sugar | Shs. 5,500 per kg | Shs..... |
| 3 loaves of bread | Shs..... Per loaf | Shs 12,900 |
| 4 ¼ litres of milk | Shs..... per litre | Shs. 4,050 |
| **Total expenditure** | | **Shs.....** |

(b) What was John's change after purchasing all the items?

10. Using a pair of compasses, ruler and pencil only.

(a) Construct triangle PQR such that PQ = 6.8cm, $<PQR = 60^0$ and $<QPR = 45^0$ (04 marks)

(b) Measure angle PRQ..... (1 mark)

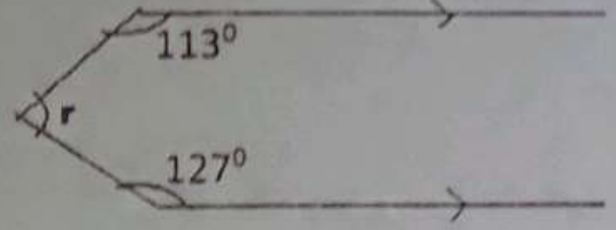
32. Aluka is 22years older than her son. In 15 years' time, Aluka will be twice as old as her son.
(a) How old will Aluka be then? (03 marks)

(b) Find their total age in 15 years' time. (02 marks)

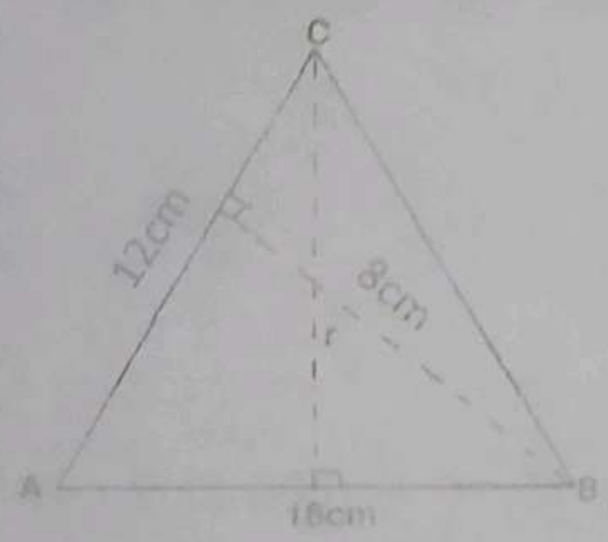
..... END .....

26. (a) Given that the interior angles of a regular polygon is $108^0$ more than the exterior angle. How many sides has the polygon? (03 marks)

(b) In the figure below, find the value of angle r. (02 marks)




27. (a) Study the figure below and use it to answer questions that follow.




Find the value of r. (03 marks)

(b) Find the base of a triangle whose area and height are $24m^2$ and 6m respectively. (02 marks)