# KAMPALA PARENTS' SCHOOL 2004
## P.7 INTERNAL MOCK EXAMINATION, 2024
## MATHEMATICS

***Time Allowed: 2 hours 30 minutes***

| **Index No.** | **Random No.** | | | | | | | **Personal No.** | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |

**Candidate's Name:** ……

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**Candidate's Signature:**

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**School Random No.**

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**District ID:** ……

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**<u>Do not open this booklet until you are told to do so.</u>**

**<u>Read the following instructions carefully</u>**

1. This paper has two sections: A and B.
2. Section A has 20 short questions (40 marks).
3. Section B has 12 questions (60 marks)
4. Attempt **ALL** questions. Answers to both sections must be written in spaces provided.
5. All answers must be written in blue or black ballpoint pen or ink but not in pencil. Diagrams should be drawn in pencil.
6. Crossing out of answers will lead to loss of marks.
7. Any handwriting that cannot be easily read may lead to loss of marks.
8. Do not fill anything in the box indicated for examiner's use only.

| **FOR EXAMINERS USE ONLY** | | |
|---|---|---|
| **QN.NO.** | **MARK** | **SIGN** |
| **1-10** | | |
| **11-20** | | |
| **21-30** | | |
| **31-32** | | |
| **TOTAL** | | |

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## SECTION A (40 MARKS)

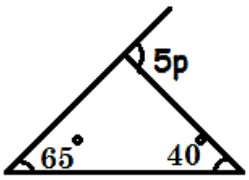
1. Workout:
$$\begin{array}{r} 3\quad 6 \\ -\ 2\quad 2 \\ \hline \end{array}$$

2. Write 1,440 in words.

3. Solve for k: $4k^2 = 36$

4. Express 29 in finite 8.

5. Find the value of p in the diagram below.




6. A motorist travelled at a steady speed of 120km/h for 150 minutes. What distance did he cover?

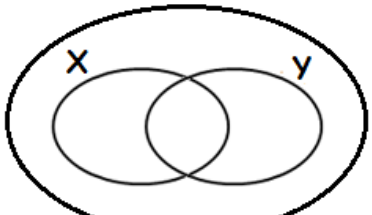
7. Work out the square root of the next number in the sequence:
1, 4, 9, 16, 25, ____

8. Given that the distance round a circular orchard is 176m. Calculate its radius.

9. The exchange rate at KF forex bureau is 1 US dollar = Ug.shs.3750. Mr. Okim has 400 US dollars. How much money does he have in Uganda shillings?

10. On a farm, $\frac{1}{4}$ of the animals are birds and the rest are goats. What percentage of the farm are goats?

11. Shade the complement of set Y in the diagram below.



12. Write $(4 \times 10^3) + (7 \times 10^1) + (6 \times 10^{-1})$ as a single numeral.

13. Increase sh.6,000 in the ratio of 7:6.

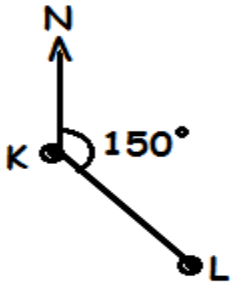
14. Simplify: $p^5 \times p^3 \div p^6$

15. If $F_{40} = \{2_1, 2_2, 5_1, n\}$, work out the value of n.

16. Find the number that is half way between 23 and 45.

17. In the space below, draw the supplement of 135o.

18. Work out the bearing of point L from point K.




19. How many hops of 4cm can a frog make to cover a distance of 2 metres?

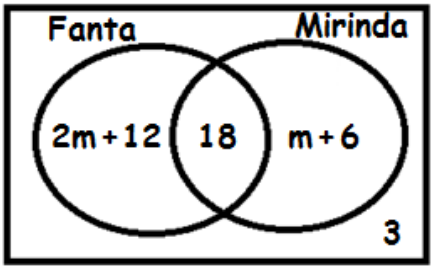
20. The average of 14, 6, $a^2$ and 4 is 10. Determine the value of a.

## SECTION B (60 MARKS)

21. a) Solve: $\frac{2y}{3} + 4 = 12$
(3mks)

b) Find the solution set for:
$3d - 1 < 14$
(2mks)

22. The Venn diagram below shows the number of guests who took different types of soda. Study and use it to answer the questions below.




a) Given that the number of guests who took both types of soda is equal to the number of those who took Fanta only, find the number of guests who took Mirinda only.
(3mks)

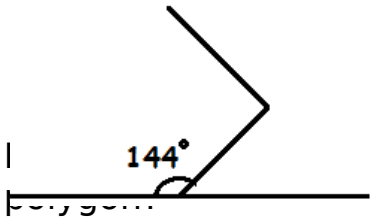
b) How many guests did not take Mirinda?
(2mks)

23. a) There are 20% more girls than boys in an extended family. If there are 12 girls in the family, calculate the total number of children in the family.

(3mks)

b) Amy deposited some money in a bank that offers 3% interest per year. If she got a simple interest of sh.120,000 after five years, how much did she deposit.
(3mks)

24. The figure below shows the interior and exterior angles of a regular polygon, use it to answer the questions that follow.




a) I the regular polygon.
(3mks)

b) Calculate its interior angle sum.

(2mks)

25. Pearl bought the following items from the shop.
4kg of posho at sh.2,500 per kg
500ml of paraffin at sh.800 per 100ml
1½kg of rice at sh.15,000
3 tins of omo at sh.3,000 a tin
a) If he was given a discount of 10%, how much did she spend altogether?
(4mks)

b) Given that he used sh.2,500 on transport, calculate his change if he went with fifty thousand shillings.

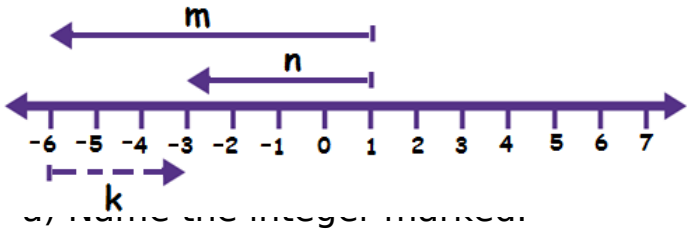
(2mks)

26. a) Using a pair of compasses, a ruler and a well sharpened pencil, construct a parallelogram BEDS

where BE = 7cm, line ED = 4.1cm and angle BED = 120°.
(4mks)

b) Drop a perpendicular line from S to meet line BE at K.
(1mk)

27. Study the number line and answer the questions below.




a) Name the integer marked.
(1mk@)

(i) k _____

(ii) m _____

(iii) n _____

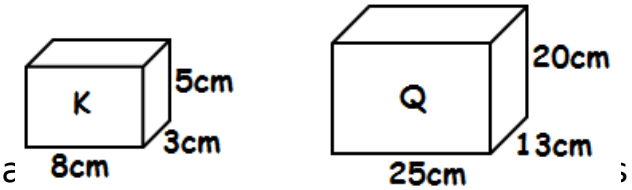
b) Write the mathematical sentence shown on the above number line.
(1mk)

28. Two taps are connected on a water tank. Tap W takes 3 hours to fill the tank and tap Q takes 4 hours to empty the same tank. One day when the tank was $\frac{1}{4}$ full of water, two taps were opened at the same time. How long did it take the tank to get full? (5mks)

29. A driver left town X at 9:30a.m travelling at a speed of 70km/h and made a stop over at the garage at 11:30a.m for an hour. He then continued to town K at a speed of 60km/h covering a distance of 120km.
a) Calculate the distance between town X and the garage.
(2mks)

b) Find his average speed for the whole journey.
(3mks)

30. Match boxes of size K are to be packed into box of size Q.




a) How many matches of size K can be packed in box Q?
(1mk)

b) Calculate the total number of match boxes (K) that can be packed in box (Q).
(3mks)

31. The width and length of a rectangular table are in the ratio of 3:5 respectively. If its perimeter is 64dm,

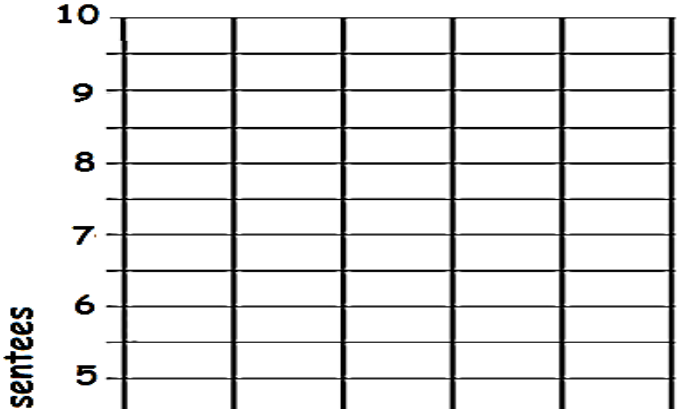
a) Calculate the actual width of the table.
(3mks)

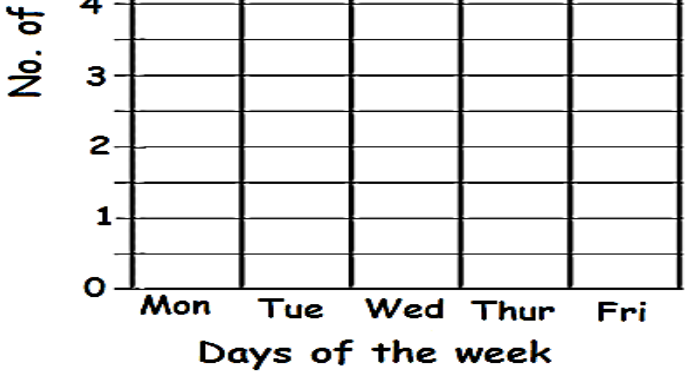
b) Calculate its area.
(2mks)

32. The table below shows the number of pupils who attended school in a certain week.

| Days of the week | No. of pupils present |
|---|---|
| Mon | 44 |
| Tue | 45 |
| Wed | 47 |
| Thur | 46 |
| Fri | 49 |
| Total in class | 50 |

If the total class is 50 pupils, show the number of absentees per day on the graph below.
(5mks)






***** Good Luck!*****