KAMPALA PRIMARY SCHOOLS'
SKYLINE EXAMINATIONS™
Pre-MOCK – 2024
1

MATHEMATICS

Time Allowed: 2 hours 30 minutes

Index No. ☐☐☐☐ ☐☐ ☐☐☐

Candidate's Name:..

Candidate's Signature:...

School Name:..

District Name:...

DO NOT OPEN THIS BOOK LET UNTIL YOU ARE TOLD TO DO SO.

**Read the following instructions carefully;**

1. The 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. All answers to both Sections A and **B** must be written in the spaces provided.

5. All answers must be written using blue or black ball-point pen or ink. Only diagrams and graphs work may be done in pencil.

6. Unnecessary alteration of work will lead to loss of marks.

7. Any handwriting that cannot easily be read may lead to loss of marks.

8. Do **not** fill anything in the boxes indicated for examiners' use only.

Turn Over

1. Workout: $163 - 121$

2. Write XCIV in Hindu Arabic numerals.

3. Find the value of **K** in the figure below.

$2K$ $48°$
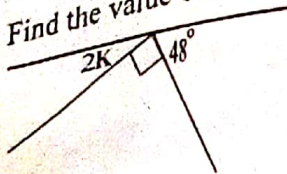
4. List all factors of 24.

5. Given that Set **P** = {a, b, c, d, e}
   and Set **K** = {a, e, i, o, u}
   Find $n(P \cap K)'$.

The cost price for a packet of a blue pen is Shs.13,500/= and its selling price is Shs.36,000/=. The selling price of 9 pens is equal to the cost price of a complete packet. Find the number of pens contained in the packet.

Multiply 111_{two} by 11_{two}.

8. Express 0.00423 in scientific notation.

9. Using a ruler, a sharp pencil and a protractor only. Draw an angle of 120^0 in the space below.

10. (i) Work out $(214 \times 53) + (47 \times 214)$ using distributive property.

   (ii) Given that $a = {}^+8$, $b = 5$ and $C = {}^-3$. Find $C + a - b$.

11. Solve: $\frac{3}{5} n + 4 = 10$

12. A circular pond is 20 metres wide. Calculate the distance around the pond (Use π as 3.14)

13. Wasswa received a loan of Shs.600,000/= from Kato. He promised to pay it back after 4 months at an interest rate of 4% per month. How much money did he pay back at the end of the period?

14. Express 0.4666... as a common fraction in its simplest form.

15. Express 30 metres per second to kilometres per hour.

16. A mathematical lesson that was to last 2½ hours was to begin at 9:00a.m. The examination delayed for ¾ hours the papers had not yet reached the examination centre. At what time did the examination end?

**17.** The team leader recorded points scored by club members: 7, 5, 6, 7, 6, 5, 6

   (i) What is the modality frequency of the scores?

   (ii) Work out the range of the scores.

18. Counting numbers from 1 and 10 are written on cards and then put them in a box. What is the probability of selecting a prime number from them?	**19.** In a party, 420 people use 140 litres of milk. How many litres of milk are needed by 600 people?

20. Use the figure below to answer the questions that follow.

12y dm

9y dm

15y dm
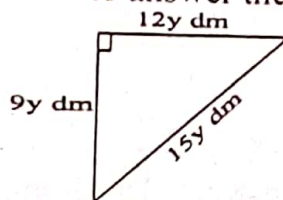
   (i) Find the **area** of the figure above.

   (ii) What is the distance around the given figure?

SECTION B: 60 MARKS

21. (a) Solve: $2(8 - X) = 4$ (3 marks)   (b) Simplify: $^-3(^-m + 1) + 4(m + 2)$

(2 marks)

22. In a fish factory, there are 20% more female workers than male workers. If female workers are 90;

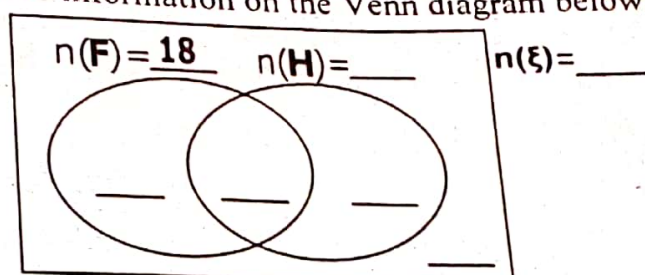(a) Calculate the population of the workers in the fish factory. (4 marks)

(b) How many less male workers than the female workers are in the fish factory? (2 marks)

23. In a club, 18 members like Football n(F), 4 members dislike both games, (16 – K) like Hockey n(H) but not Football.

(a) Represent the above information on the Venn diagram below. (3 marks = ½ Mark each)

n(F)=__18__   n(H)=____   n(ξ)=____

(b) If the number of members who don't like Football is 10. Find the members who like both games. (2 marks)

24. A metallic rectangular tank has a length of 6cm and a height of 4cm. The length of all its edges sum up to 60cm.
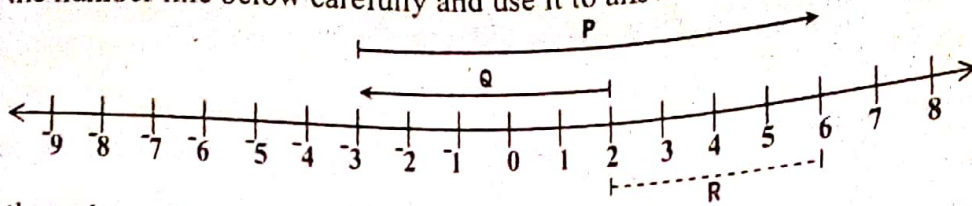
(a) How wide is the tank? (3 marks)

(b) What is the capacity of the tank? (2 marks)

25. Study the number line below carefully and use it to answer the questions below.

(1 mark each)

(a) Write the values of:

P _____

Q _____

R _____

(2 marks)

(b) Write down the mathematical sentence shown on the number line.

26. Kajubi is a carpenter who made a rectangular table whose length and width are in the ratio of 5:3 respectively. The distance around the table is 128cm. How long and wide is the table he made? (4 marks)

27. The distance from Kampala bus park to Mbarara is 275Km. A bus travelled from Kampala to Mbarara and then back to Kampala on the same day. The bus fare was Shs.40 per kilometre for every passenger and the capacity of the bus is 65 passengers.

(a) How much money does each passenger pay from Mbarara to Kampala? (3 marks)

(b) Calculate the amount of money the bus made if on each trip it carried its full capacity. (3 marks)

28. Ssebi arrived in Uganda from the United Kingdom with the following currencies in his bag:

(i) US dollars ($) 500

(ii) Pound Sterling (£) 800

(iii) Kenya Shilling (K.Shs) 12,000

If the exchange rate in the forex bureau is as follows:

(i) 1 US dollar ($) costs Ug.Shs.3,600

(ii) 2 Pound Sterling (£) costs Ug.Shs.8,000

(iii) 1 Kenya Shilling (K.Shs) costs Ug.Shs.40

How much money in Uganda Shillings did he have in his bag?　(4 marks)

29. In Koko P/s, 200 candidates sat for P.L.E of 2023 whereby $\frac{2}{5}$ of the candidates were boys and the rest were girls. If an eighth of the girls passed and a quarter of the boys failed the examination. How many candidates passed the 2023 examinations?　(4 marks)
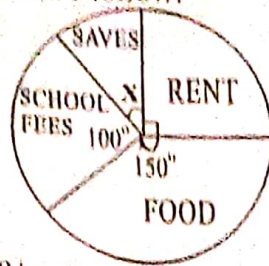
30. (a) Express 13_{ten} to binary base.　(2 marks)

(b) If $10100_{two} = 40_x$, find base **X**.　(3 marks)

31. The pie-chart represents the expenditure and savings of Zizinga in Uganda Shillings. Use it to answer the questions that follow.

(a) If Zizinga saves Shs.200,000/=, find his income. (3 marks)

(b) What percentage of his income does he spend on Rent? (2 marks)

(c) By how many more shillings does he spends on Food than on Fees? (2 marks) ·

32. With the help of a ruler, a sharp pencil and a pair of compasses only, construct triangle ABC where side AB = 6cm, angle BAC = 45^0 and angle BCA = 105^0. Drop a perpendicular line from C to meet AB and D. (4 marks)

(b) Calculate the area of triangle ABC. (1 marks)