RUBANDA SOLIDARITY PRIMARY SCHOOL

PRIMARY SEVEN MOCK EXAMINATION ACADEMIC PANNEL

MATHEMATICS EXAM 2023

Time:2 hours 30 minutes

Name……

School……...

Class……

District……

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

Read the following instructions carefully.

1. This paper is made up two sections A and B.
2. Section A has twenty (20) questions (40 marks)
3. Section B has twelve (12) questions (60 marks)
4. Answer all questions in both sections A and B
5. All answers in both sections must be written in the space provided.
6. Use blue or black ball point pen and ink, all drawings must be done using a pencil.
7. Unnecessary crossing of answers leads to loss of marks.
8. Any handwriting which cannot be easily read, may lead to loss of marks.
9. Moving in and out of the classroom during examination, is a sign of examination malpractice.
10. Do not share your work with your friend or else one.

QUIZ	MARKS	INITIALS
1-10		
11-20		
21-24		
25-28		
29-32		
TOTAL		

SECTION A: 40 MARKS

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

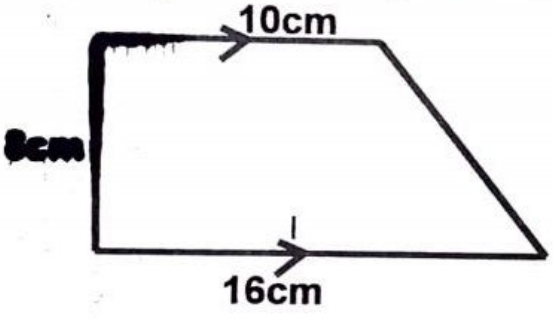
1. **Work out:** 3 x 4

2. Express **139** in Roman Numerals.

3. In a class of 120 pupils, **30%** of the children are below **13 years** of age. How **many** children are above 13 years?

4. **Find the sum** of the **first five** square numbers.

5. **Find the area** of the figure below.



6. **Draw** an angle of **80^0** in the space below.

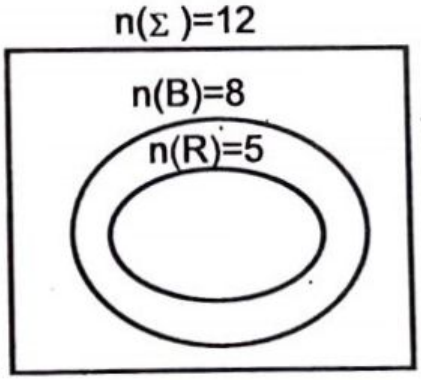
7. How many **days** are in **32** weeks?

8. The **ratio** of girls to boys at Kagoma Primary School is **3:5**. If there are **78** girls **less than** the boys, how many **pupils** are boys?

9. Given that the **mean** of P, P+3, P+5, P+7, 10 and 11 is **48**. Find the **value** of **P**.

10. Find the Greatest Common Factor of **6**, **8** and **24**.

11. The diagram below shows the number of pupils who eat **beans** (B) and **rice** (R).



How many **pupils** do not eat **beans**?

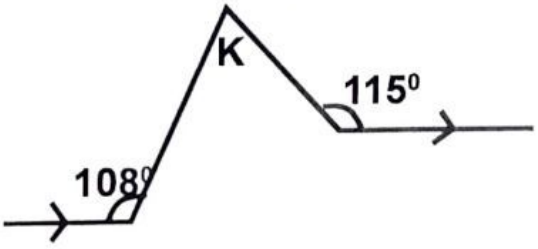
12. How many **200g** packets of salt can be obtained from $2\frac{4}{5}$**kg?**

13. **Simplify** 3 + 5 = _____ (finite 7) using **a dial**.

14. A trader bought bunches of matoke worth **sh. 1,400,000** at sh. 35,000 **each**. How many **bunches** did he buy?

15. **Work out:** $3^{2y} = 243$

16. Find the value of **K** in the diagram below.



17. A motorist drove at a steady speed of **100 km/h** for **4** hours. On the **return journey**, he slowed down to **80km/h**. How long did the **return journey** take?

18. Kato tossed a dice once. What is the probability that a composite number appeared on top?

19. A man **bought** an article and sold it at **sh. 58,000** making a loss of **sh. 3,500**. At what price did he **buy** the article?

20. **Simplify**: 2(4p - 3) - 3(p+4)

SECTION B: 60 MARKS

Marks for each part of the question are indicated in the brackets.

21. A square piece of land of side **8 metres** has the same area with a rectangular flower bed of **width 4m**.

a) Calculate the **length** of the flower bed.

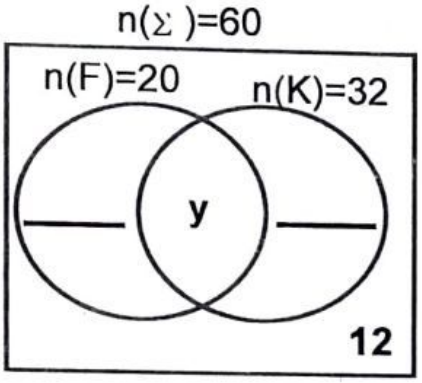
(03 marks)

b) A wire is wound on a log of diameter 28m twelve times. Calculate the length of the wire.

(03 marks)

22. At Pioneer Junior School, all pupils in P.7 speak **Eng**lish **(E)**, **20** speak French **(F)**, **32** speak Kiswahili **(K)**. Y pupils speak all the **three** languages.
12 pupils speak only one language.

a) Complete the venn diagram using the given information.



(02 marks)

b) Find the value of **y**.

(02 marks)

c) What is the **probability** that a pupil picked at random speaks only one language?

(01 mark)

23. **The table below shows the uniform charge of a certain school.** *Study and use it to answer the questions that follow.*

Item	BOY	GIRL
school uniform	sh. 35,000	sh.30,000
sweater	sh. 25,000	sh. 25,000
casual wear	sh. 18,000	sh. 15,000
sports wear	sh. 20,000	sh. 20,000

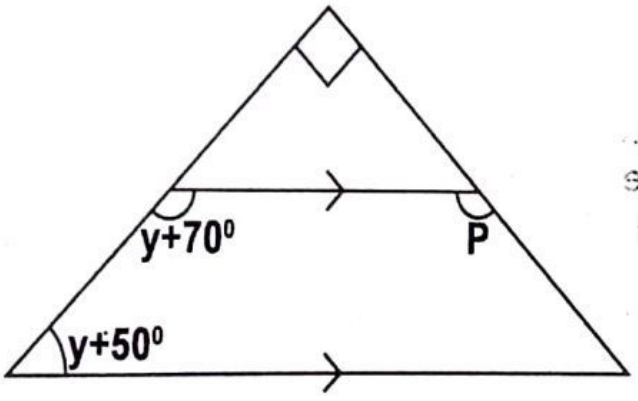
a) If a parent has **two** boys and **three** girls, how **much** does he spend on uniform?

(03 marks)

b) The cost of 5 balls is **sh. 500,000**. The cost of **10 desks** is **equal** to the cost of **15** such balls. Find the cost of **15 desks** of the same kind at the same rate.

(03 marks)

24. *Study the figure below and answer the questions that follow.*



a) Find the **value** of **y**.

(03 marks)

b) Calculate the **interior angle** sum of a regular polygon with 15 sides.

(02 marks)

25. a) Convert 214_{five} to **decimal** system.

(02 marks)

b) **Work out:**
$$\begin{array}{r} 2\ 3\ 2_{five} \\ -\ 1\ 3\ 4_{five} \\ \hline \\ \hline \end{array}$$

(02 marks)

26. A coach bus that left Mbarara at 9:30am moved at a speed of 85km/h arrived at Masaka at 11:30am. The bus stayed for 30 minutes at Masaka then it continued to Kampala covering a distance of 98km at a speed of 49km/h.

a) How **long** is Kampala from Mbarara?

(02 marks)

b) At what **time** did the bus **arrive** in Kampala?

(02 marks)

27. Four children; Maria, Gabbie, Yvonne and Michelle shared sweets in the ratio **3:1:4:2**. If Yvonne got **24** sweets;
    a) How many **sweets** did they share altogether?

(03 marks)

b) How many **more** sweets did Maria get than Michelle?

(03 marks)

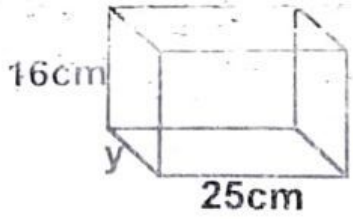
28. A box contains **150** pieces of chalk. **8** boxes are packed into a medium sized rectangular box and **10** medium size are packed into a carton.
    a) How **many** pieces of chalk are in the carton?

(03 marks)

b) If the trader charges **sh 4000** a box, what will it cost two medium sizes of rectangular boxes?

(02 marks)

29. The capacity of the rectangular tank below is 3.2 **litres**.



a) Find the value of y.

(03 marks)

b) Work out the **area** of the top and bottom **faces**.

(02 marks)

30. a) Express **72** as a product of its **prime factors**.

(02 marks)

b) The **LCM** of two numbers is 60 and the Highest Common Factor is **5**. If one of the numbers is **20**, what is the **second** number?

(03 marks)

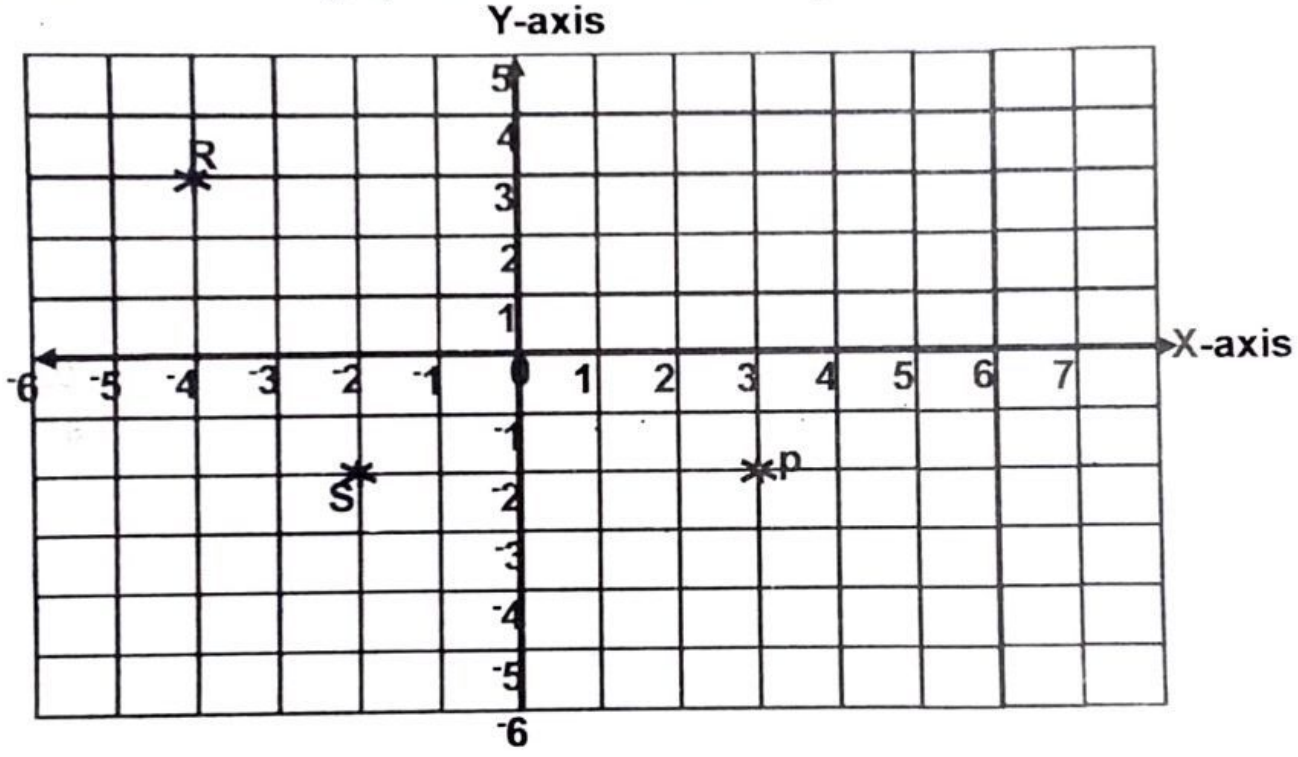
31.a) Using a pair of compasses, a pencil and a ruler only, construct a **rhombus ABCD** of side **5cm** with angle ABC = **60^0**

(04 marks)

b) Measure the **length** of the diagonal **BD.**

(01 mark)

32. *Use the co-ordinate graph below to answer the questions that follow.*



i) Write down the co-ordinates of the **points**:

R _____

S _____

P _____

(03marks)

b) Locate and plot point **Q** on the graph such that the figure formed by the four points is a parallelogram.

(02marks)