

MITOOMA DISTRICT ACADEMIC BOARD
2023 P.7 MOCK EXAMINATION
MATHEMATICS

Time Allowed: 2 Hours 30 Minutes.

CANDIDATE'S NAME:

SCHOOL NAME: **INDEX No.**

SUB COUNTY:

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

1. This paper is made up of two sections: A and B. section A has 20 questions and section B has 12 questions.
2. Answer all questions. All answers for both section A and B must be written in the spaces provided.
3. All working must be done using a blue or black ball point pen or ink. Any work done in pencil will not be marked except drawings and diagrams.
4. Unnecessary change in your work and hand writing that can not be easily read may lead to loss of marks.
5. Do not fill anything in the table indicated "for examiners use only" and boxes inside the question paper.
6. The use of electronic calculators and mathematical tables are not allowed.

FOR EXAMINER'S USE ONLY		
Qn.No	Marks	EXR's Name
1-5		
6-10		
11-15		
16-20		
21-22		
23-24		
25-26		
27-28		
29-30		
31-32		
TOTAL		

SECTION A
Question 1 to 20 carry two marks each.

1. Workout $125 - 25$

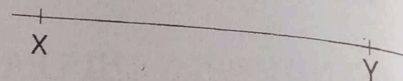
2. Write 145,015 in words

3. Write 432 in roman numerals







4. Given that set $P = \{m, n, o, y\}$. Find the number of proper subsets that can be formed from set P.

6. Using a ruler, a pencil and a pair of compasses only, construct a perpendicular from point A onto the line segment XY at

A



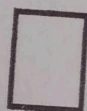
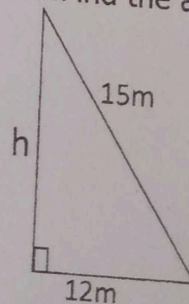
7. Given $r = -$ and $P = -$, find the value of $-$

8. Given that  represents 12 apples, how many apples can be represented by      ?

9. Work out $5 - 5 =$

5. Find the next number in the sequence.
 6, 10, 15, 21,

10. Find the area of the figure below



11. A bus from Jinja reached Kampala at 8:20 am. If it took 2 hours and 15 minutes to reach Kampala, what time did it leave Jinja?

16. A die is tossed once, what is the probability that a number less than 5 is shown on top at random?

12. A woman borrowed Shs.280,000 from the village SACCO at an interest rate of 3% per annum for a period of $2\frac{1}{2}$ years. Calculate the interest the woman paid after that period.

17. Find the sum of the place value of 6 and 8 in the number 69.98

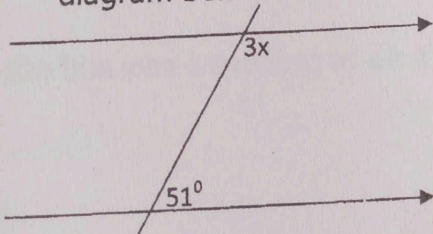
18. The LCM and GCF of two numbers is 72 and 12 respectively. Of one of the numbers is 36, find the second number.

13. Convert 29_{ten} to binary system

14. Solve $-6 < 4 - 2w < 8$

19. Find the arithmetic mean of $4y$, $y-5$, 15 , $3y+6$

15. Find the value of x in degrees in the diagram below



20. Ivan had banknotes numbered consecutively from AP 624456 to AP 624753, if each bank note was worth ten thousand shillings, how much money did Ivan have?

SECTION B
 Answer ALL questions in this section. Marks for each question are indicated in the brackets.

21.(a) work out $\frac{2.4 + 1.2}{0.9 \times 0.2}$

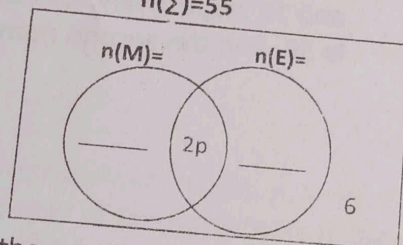
(3 marks)

(b) Simplify $\frac{1}{4} - \frac{1}{2} + \frac{3}{4}$

(2 marks)

22. In a class of 55 pupils, 21 pupils like mathematics (M) only, 18 like English (E) only, 2p like both subjects, while 6 pupils do not like any of the two subjects.

a) Complete the venn diagram below

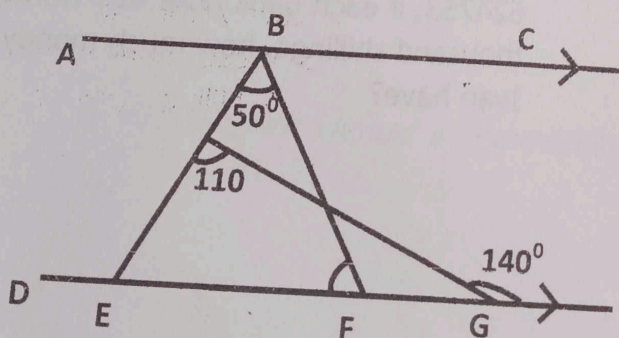


(2 marks)

b) Find the number of pupils who like mathematics.

(3 marks)

23. In the diagram below, \overline{AC} is parallel to \overline{DG} . Study it carefully and find the value of the unknown angles



a) Find angle EFB

(3 marks)

b) Find angle ABE

(2 marks)

24.(a) Solve for x $\frac{2x-1}{3} = \frac{x+2}{4}$

(3 marks)

(b) Solve for K: $7K - 3(K-2) = 14$

(2 marks)



25. The table below shows the arrival and departure time for Global coaches bus that travelled from Mbarara to Kampala.

TOWN	ARRIVAL TIME	DEPARTURE TIME
Mbarara		8:45 am
Masaka	10:30 am	10:45am
Mpigi	11:45 am	12:15 pm
Kampala	12:45 pm	

a) Calculate the time taken for a bus to travel from Masaka to Mpigi towns.

(1 marks)

b) For how long did the bus rest at Mpigi town?

(1 mark)

c) If the bus was travelling at an average speed of 60km/hr, how far is Mbarara from Kampala?

(2 marks)

26. (a) using a ruler, a pair of compasses and a pencil only, construct a rhombus PQRS with diagonal PR = 10cm and diagonal QS = 8cm (4 marks)

(b) Measure line PQ



(1 mark)

27. Study the exchange rates below and use them to answer the questions that follow

Currency	Buying	Selling
1 US dollar \$	Ugshs. 3700	Ugshs. 3800
1 pound sterling £	Ugshs. 5000	Ugshs. 5200
1 kenya shilling (Ksh)	Ugshs. 32	Ugshs 35
1 Tanzania shilling (Tzsh)	Ugshs. 20	Ugshs 25

- a) A television set costs Ugshs. 228,000, convert the cost of a television set in United states dollars (US \$) (2 marks)

- b) Mr. Rwabairu bought a radio cassette at 125 United States dollariars, convert the amount Rwabairu paid for a radio Cassette in Tanzania shillings (Tzsh). (3 marks)

28. In a school library, $\frac{1}{4}$ of the books are English books, $\frac{2}{5}$ of the remainder are mathematics books and the rest are other books. If there are 180 other books, find the total number of books in the library. (5 marks)

- 29.(a) A teacher awards 3 marks for every correct answer and deducts 2 marks for every wrong answer, what is the score for a candidate who gives 30 correct answers and 10 wrong answers? (2 marks)

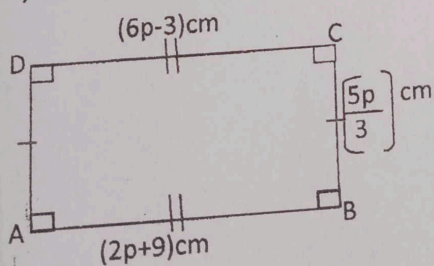
- (b) If a candidate did 15 questions and obtained 20 marks, find the number of

i. correct answers (2 marks)

ii. Wrong answers (1 marks)

30. A cyclist made 150 revolutions to cover a distance from his home to town. If the wheel of the bicycle has a diameter of 56cm, work out the total distance covered in kilometers. (5 marks)
(Take $\pi = \frac{22}{7}$)

31. Study the following figure and answer the questions that follow.

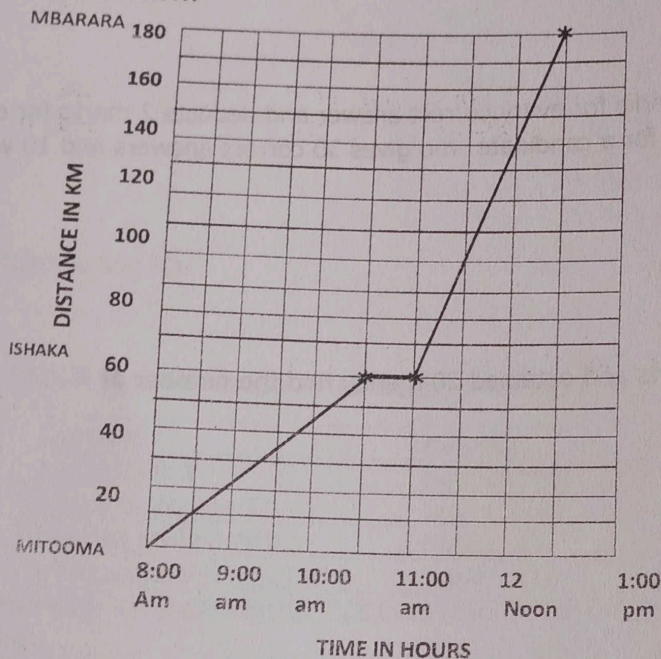


- a) Work out the value of P (2 marks)

1) Calculate the area of the figure

(4 marks)

32. The graph below shows the motorist's journey from Mitooma to Mbarara. Use it to answer the questions that follow.



How long did the motorist rest at Ishaka?

(1 marks)

How long did the motorist take to travel from Mitooma to Mbarara?

(1 marks)

What time did the motorist reach Ishaka town?

(1 marks)

Calculate the average speed for the whole journey.

(1 marks)

