MUKONO MUNICIPALITY
HEADTEACHERS' ASSOCIATION ACADEMIC BOARD
MOCK EXAMINATION

MATHEMATICS

Time allowed: 2 hours 30 minutes

Random No.						Personal No.		

Candidate's Name: ....

Candidate's Signature: ....

School name: ....

Read the following instructions carefully:

1. **Do not open this booklet until you are told to do so.**

2. This paper has two sections **A** and **B**
Section **A** has **20** questions and Section **B** has **12** questions. The paper has **13 printed pages.**

3. Answer **all** questions. **All** answers to both sections **A** and **B** must be written in the spaces provided.

4. All answers **must** be written using a **blue** or **black** ball point pen or ink. Any work written in pencil other than graphs and diagrams will **not** be marked.

5. **No calculators** are allowed in the examination room

6. Unnecessary **changes** in your work and handwriting that cannot be read easily may lead to **loss of marks.**

7. Do not fill anything in the table indicated **"FOR EXAMINERS' USE ONLY"** and in the boxes inside the question paper.

1

Turn over

SECTION A

*Answer **all** the questions in this section.*
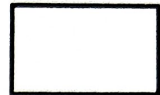
*Questions **1** to **20** carry **two** marks each*

1. Work out: $12 \div 4$

2. Write 49,014 in words.

3. Given that R = {2, a, b}. Find n(R)

4. Monkie was born in 43 BC and lived for 70 years. In which year did he die?

5. Find the number that can be added to $m - 5$ to get $8 - 3m$

6. Work out: $(41 \times 0.1) + (\frac{1}{10} \times 59)$ using common factor property.

7. Juma was the 14th from the right hand side while Alex was the 24th from the left hand side of the line. All the boys were standing in straight line at an interval of 2 metres each. How far was Alex from Juma?

8. Solve: $4 - K = 3$ (finite 5)

Turn over

9. Write 0.00691 in standard form.

10. Dace business company started a meeting with all the workers at "twenty-three minutes to two o'clock in the afternoon". Express the starting time in military time.

11. Find the next two numbers in the sequence below.
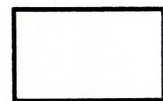   64, 32, 16, 8, 4, 2, _____, _____

12. The probability of picking a red pen from the box containing blue and red pens is $\frac{4}{7}$. If there are 12 blue pens, find the number of all pens in the box.
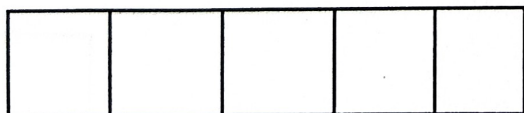
Turn over

13. Using a ruler, a pencil and a pair of compasses only, construct an angle of 165^0.

14. The distance round a square garden is 1.44km. Express the length of each side in metres.

15. The average age of three pupils is 14 years. If their teacher joins the group, the average age becomes 6 years more, how old is the teacher?
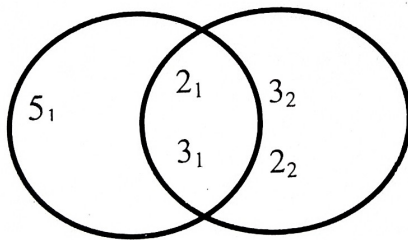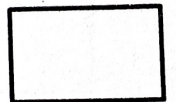
16. Shade 0.6 of the figure below.

17. Adiro bought $1\frac{1}{2}$ kg of meat at sh. 21,000. How much money will he pay for $\frac{3}{4}$ kg.

18. The interior angle of a regular polygon is 108^0 more than the exterior angle. Find the size of the exterior angle.

19. Express the two numbers prime factorized in the Venn diagram below as a ratio of increase.

20. Simplify: $^-8 - ^+6$

Turn over

SECTION B: 60 MARKS

Answer all the questions in this section.

Marks for each question are indicated in brackets.

21a) Given digits | 5 | 0 | 4 | Arrange the digits well to
form all the three-digit multiples of 5. **(2 marks)**

b) Find the quotient of the value of **4** and the place value of **0**
in the least three-digit numeral formed. **(3 marks)**

22. Xvero scored different marks in a series of tests following the
ascending order as shown below. 8,10, 2q+2, 15 and 20
a) If the median score is 4 times the third counting number,
find the value of q. **(3 marks)**

Turn over

b) Find the mean score (2 marks)

23.a) Using a ruler, a sharp pencil and a pair of compasses only, construct triangle ACE where angle ACE = 60^0, $\overline{AC}$ = 8cm and Angle CAE is 15^0 less than angle ACE. (4 marks)
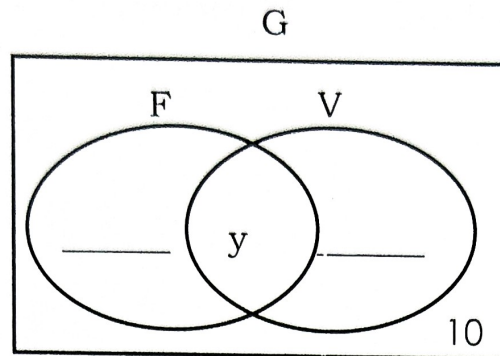
b) Measure line AE = _____ cm (1 mark)

Turn over

24. Badalu, Busigye and Bamwange shared money in the ratio of **3:2:5** respectively. Badalu gave out $\frac{1}{5}$ of her share to her family members and Bamwenge gave out $\frac{2}{5}$ of his share to the community church. If they both gave out sh. 650,000. How much money did they share altogether?   **(5 marks)**

25. In a village, 180 farmers grow vegetables (V) 120 farmers grow food crops (F), 10 farmers grow only flowers(G) while y farmers grow all the three items.
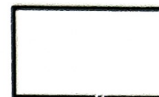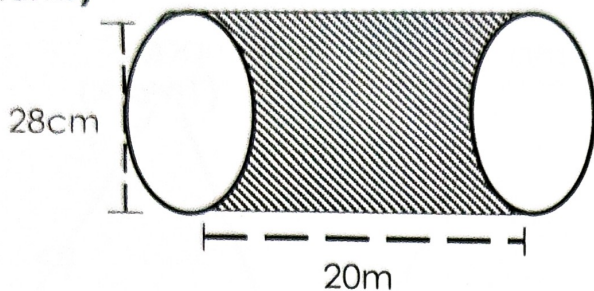
(a) If all farmers grow flowers, complete the Venn diagram below carefully. **(2 marks)**

G

F   V

_____ (y) _____

10

b) Given that the number of farmers who grow flowers is a thrice those who grow vegetables and flowers only. Find the value of y. **(2 marks)**

c) Find the number of farmers who grow only two crops in the village.
(2 marks)

Turn over

26. Find the area of the shaded curved surface in the figure below.
(4 marks)

28cm

20m

27. Mayuge and Kampala are 120km apart. The taxi makes a to and fro journey from Mayuge to Kampala and then back according to the time table. Study and use it to answer questions that follow.
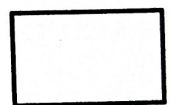
Town	Arrival time	Departure time
Mayuge	_____	6:00a.m.
Kampala	9:30a.m.	10:10a.m.
Mayuge	12:00 noon	_____

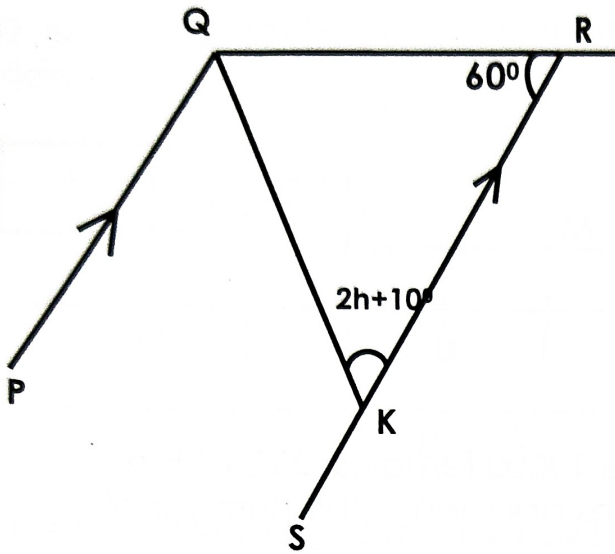a) Find the total time taken by the taxi for the whole journey.

(2 marks)

11

b) How much time did the taxi take moving around Kampala before setting off to Mayuge? **(1 mark)**

c) Calculate the average speed for the taxi over the whole journey. **(2 marks)**

28. Winnie bought 20 apples at sh 1,000 each, some apples got damaged by cockroaches. She sold the rest at sh 1,500 each and made a profit of sh 5,500.
Find the number of the damaged apples. **(4 marks)**

Turn over

ACE Scanner

29. In the figure below line PQ is parallel to RS. <QKR is half of <PQR. Study and use it to find the size of angle QKR. **(3marks)**
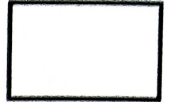

b) What angle is $\frac{1}{4}$ of its supplement? **(2 marks)**

30. a) Tana is 4 times as old as her daughter. The product of their age is 256. Find the mother's age in 7 years' time. **(3 marks)**

b) Solve: $3(x-7) - 4(x-6) = 0$ (3 marks)

31. In Buheju Town Council, there are 12000 females. 25% of the females are girls while 0.6 of the males are men. If the number of females is twice that of males.
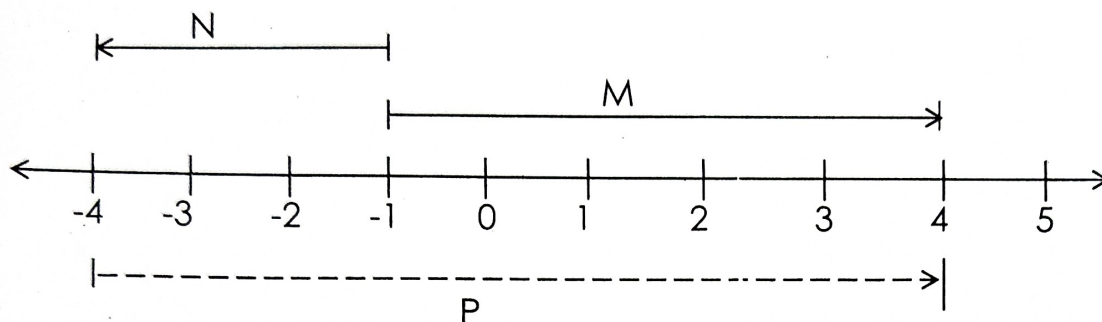
a) Find the total number of adults in the village.   (3 marks)

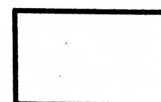b) Find the percentage of children.   (2 marks)

32. Study the number line below and use it to answer questions that follow.

a) Identify the integers marked by letters   **(1 mark @)**

   N = _____   P= _____   M= _____

b) Find the additive inverse of -7w.   **(2 marks)**

END