



UGANDA TEACHERS' EXAMINATIONS SCHEME
JOINT MOCK EXAMINATION

2024

MATHEMATICS

Time Allowed: 2 hours 30 minutes

Random No.						Personal No.		

Candidate's Name:

Candidate's Signature:

Read the following instructions carefully:

1. Do not write your **school** or **district name** Anywhere on this paper.
2. This paper has **two** sections: **A** and **B**. Section **A** has **20** questions and section **B** has **12** questions. The paper has **18 printed pages**.
3. Answer **all** questions. **All** working for both Section **A** and **B** must be shown in the spaces provided.
4. All the working **must** be done using a **blue** or **black** ball point pen or ink. Any work done in pencil other than graphs and drawings 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 Boxes inside the question paper.

FOR EXAMINERS' USE ONLY		
QN. NO.	MARKS	EXR'S NO.
1 -5		
6 - 10		
11 - 15		
16 - 20		
21 - 22		
23 - 24		
25 - 26		
27 - 28		
29 - 30		
31 - 32		
TOTAL		

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Turn Over

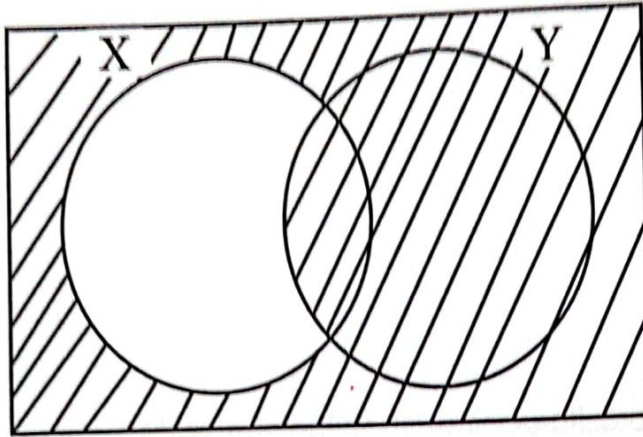
SECTION A: 40 MARKS

Answer **all** the questions in this section.

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

1. Divide 26 by 2.
2. Solve $2(a-1) = 6$.
3. Write MIX in Hindu-Arabic numerals.
4. Find the next number in the sequence.
22, 24, 27, 32, 39,

5. What region is shaded in the venn diagram below?



6. Work out $8 + 12 \div 4$.

7. Namataka drove at a speed of 36km/h. Express her speed in metres per second.

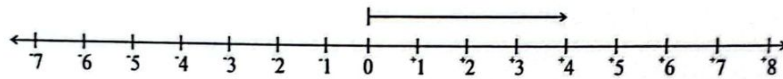
8. Given that $a = 3$ and $b = 5$, find the value of $(b-a)^2$.

Turn Over

9. The range of Mukasa's scores is 37. If Mukasa's lowest score is 59, find his highest score.

10. Complete the number line below showing the statement.

$$+4 - (-3) = +7.$$



11. Subtract

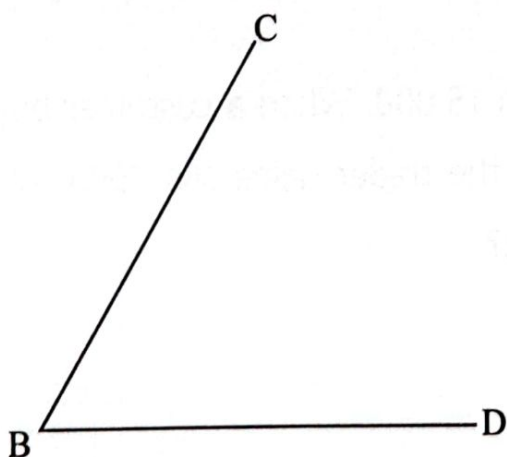
Days	Hours
7	06
-2	10
<hr/>	



12. A circular flower garden was fenced using 55 poles fixed at intervals of 0.8 metres. Find the distance around the flower garden.

13. Express a quarter past mid-night in 24 – hour clock system.

14. Using a ruler and a pair of compasses only, copy the given angle CBD and draw it at point K.



15. A mathematics lesson lasted for $3\frac{3}{4}$ hours. If it began at 11:30am, at what time did it end?



16. Find the median of $\frac{1}{2}, \frac{2}{3}, \frac{3}{4}$

17. The marked price of a dress is sh 15,000. When a customer buys the dress at a discount of sh 3000, the trader gains shs 2000. At what price did the trader buy the dress?

18. Thirty packets of biscuits weigh 6kg. Calculate the weight of each packet in grammes.

19. Calculate the mean of $6m + 5$, 7 and $9m - 3$.

20. Four men can slash a compound in nine days, how many more men are needed to do the same piece of work in two days?

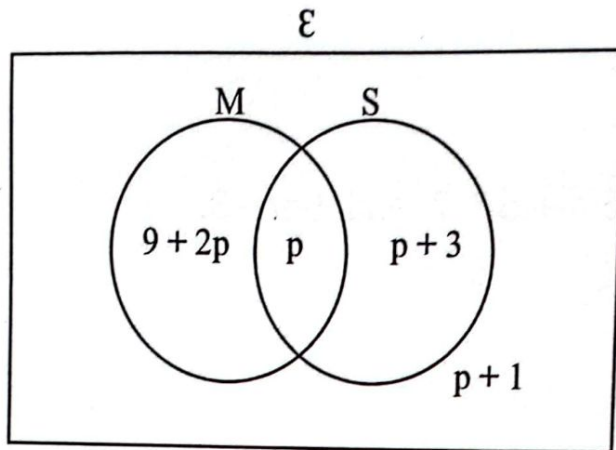


SECTION B: 60 MARKS

Answer **all** questions in this section.

Marks for each question are indicated in brackets.

21. The venn diagram below shows how learners passed Mathematics (M) and Science (S)



- (a) If 16 more learners passed Mathematics than Science. Find the value of p . (03 marks)
- (b) How many learners did not pass Mathematics. (02 marks)

22. On the school trip, Uthman was given sh 20,000, he spend $\frac{1}{4}$ of it on transport, $\frac{4}{5}$ of the remainder on lunch.

(a) What fraction did he remain with?

(04 marks)

(b) How much money did he use for lunch?

(01 mark)

23. The table below shows the costs of United states dollars (USD) and Kenya shillings (KES) in Uganda shillings (UG sh.) on Monday, Tuesday and Wednesday of a certain week. Study and use it to answer the questions that follow.

Currency	Cost in Uganda shillings (UG sh.)		
	Monday	Tuesday	Wednesday
United states dollars (USD)	3745	3735	3746
Kenya shillings(KES)	25.15	25.0	24.46

(a) Which day did the Kenya shillings record the highest cost?

(01 mark)

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(b) Work out the amount in Uganda shillings Mazinga got from 250 united states dollars (USD) on Wednesday. (02 marks)

(c) Majwega converted 74,700 Kenya shillings to US dollars on Tuesday. Calculate the number of Us dollars he got. (03 marks)

24. (a) In a parent's meeting at a certain school, the ratio of males to females was 3:5 respectively. If 30 females' parents attended the meeting, how many male parents were in the meeting.

(03 marks)

(b) If $\frac{1}{3}$ of the male parents were below the age of 40. How many male parents were above the age of 40? (03 marks)



25. Cylindrical tins of diameter 10cm and height 7cm were filled with juice. The tins were then packed into a box measuring 50cm long by 40cm wide and by 20cm high (use π as $3\frac{1}{7}$).

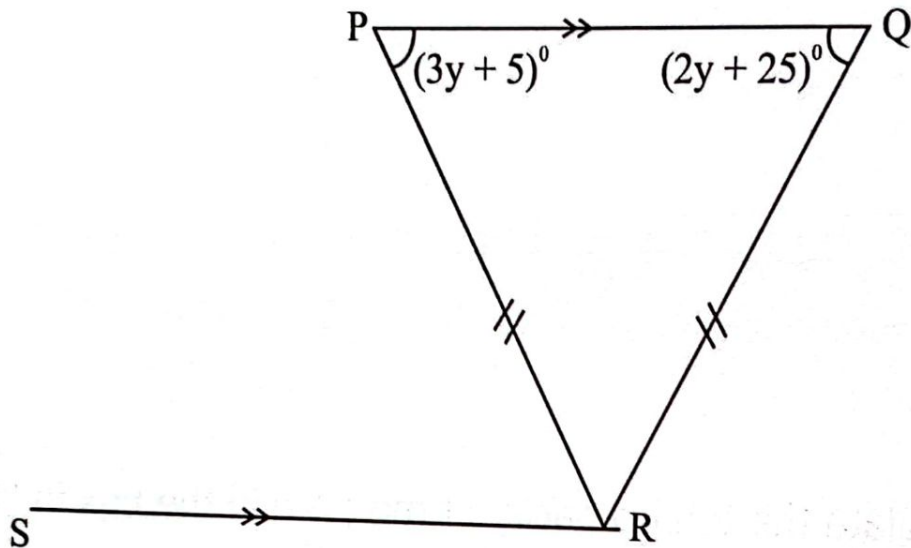
(a) Find the total number of tins that filled the box. (02 marks)

(b) Calculate the total capacity of the juice in the box in litres.

(03 marks)

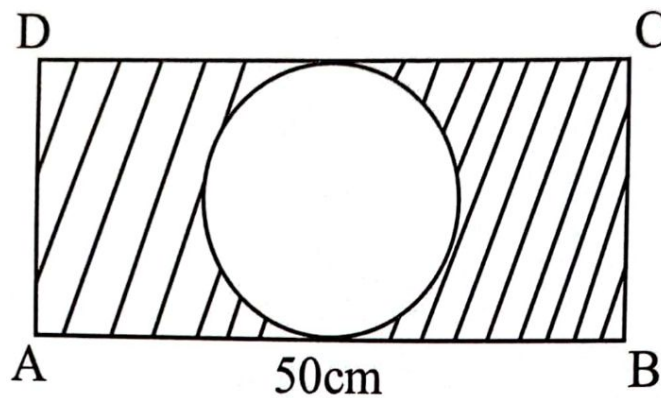


26. The **figure** below **PQR** is an Isosceles triangle. Line **SK** is parallel to **PQ**



- (a) Find the value of y in degrees. (02 marks)
- (b) Find the size of angle **SRQ**. (03 marks)

27. A circular plate whose area is 616cm^2 was cut from a rectangular metal sheet **ABCD** of length 50cm as shown below.
(Use $\pi 3\Box$)



- (a) Find the width of the metal sheet. (02 marks)
- (b) Calculate the area of the metal sheet that remained after cutting off the circular plate. (02 marks)

28. Opio has $(3t + 500)$ cows, $(1200 - t)$ hens and $(2t - 500)$ goats on his farm. If the number of cows is three times the number of goats on Opio's farm.

(a) Find the value of t

(03 marks)



(b) Find the number of hens on Opio's farm.

(01 mark)

29. Golola's water metre reading was 1469 units last month and now it reads 1619.

(a) How many units of water has Golola used?

(02 marks)

(b) If each water unit costs him sh 600 and VAT of 10%, how much will Golola pay altogether?

(02 marks)

30. Musoke sold a phone to Nagawa at sh 340,000 making a loss of 15%. Nagawa later sold the phone at a profit of 25%

(a) Calculate the amount of money Musoke paid for the phone.

(02 marks)

(b) Find the profit Nagawa made.

(03 marks)



31. Lake A is 300km west of Lake K and Lake G is 500km from Lake K on a bearing of 240° .

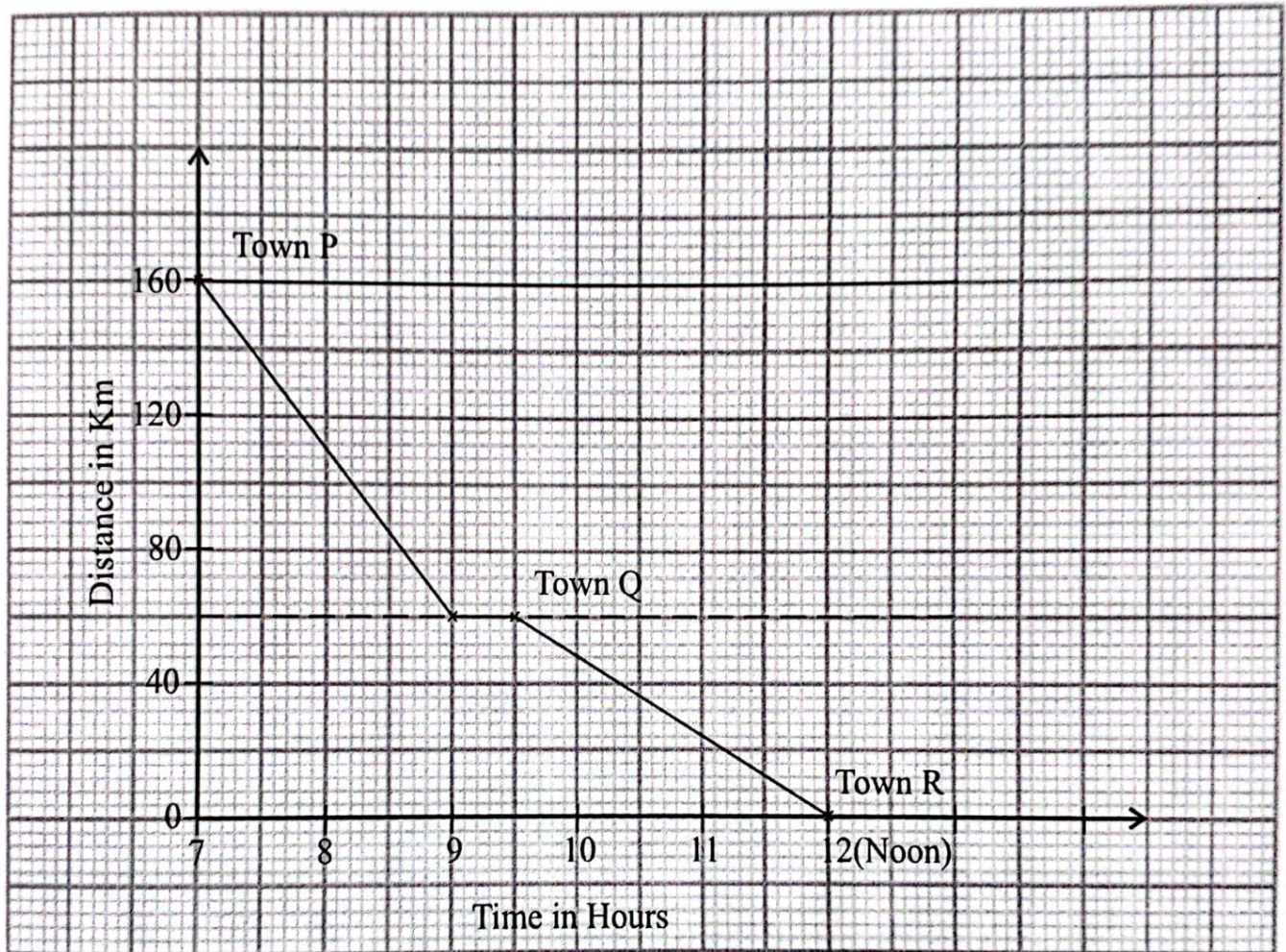
(a) Draw a sketch diagram to show the location of the three Lakes

(01 mark)

- (b) Using a scale of 1cm to represent 50km, draw accurate diagram to show the location of the three lakes. *(03 marks)*

- (c) From your accurate diagram find the bearing of Lake A from Lake G. *(01 mark)*

32. A motorist travelled from town P to town R via Q. study the graph below carefully and use it to answer questions that follow.



(a) What was the departure time of the motorist. (01 mark)

(b) For how long did the motorist stay at town Q? (01 mark)

(c) How far is town Q from town R?

(01 mark)

(d) Calculate the motorist's average speed over the whole journey?

(01 mark)