MUKONO MUNICIPAL COUNCIL

MOCK EXAMINATIONS 2023

MATHEMATICS

Time Allowed: 2 hours 30 minutes

RANDOM No.						PERSONAL No.		

Candidate's Name .....

Candidate's Signature.....

School Name .....

District Name .....

Read the following instructions carefully:

1. The paper has **two** sections: **A** and **B.**
2. **All** the working for both sections **A** and **B** must be shown in the spaces provided.
3. **All** working must be done using a blue or black ball-point pen or fountain pen.
   Diagrams should be drawn in pencil.
4. Unnecessary changes of work may lead to loss of marks.
5. Any handwriting that cannot easily be read may lead to loss of marks.
6. Do **not** fill anything in the boxes indicated: **"For Examiners' Use Only"** and those inside the question paper.

FOR EXAMINERS' USE ONLY		
Qn. No.	MARKS	EXRS' NO.
1 - 5		
6 - 10		
11 -16		
17 -20		
21		
22 - 23		
24 - 25		
26 - 27		
28 - 29		
30		
31 - 32		
Total		

Turn Over

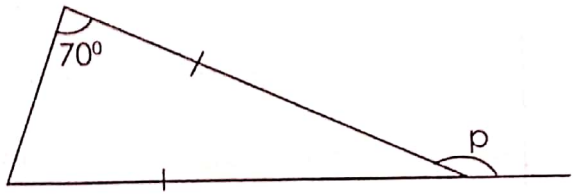
SECTION A:

Answer **ALL** questions in this Section

Questions **1** to **20** carry 2 marks each.

1.	Work out 34 + 21
2.	Write 69 in Roman numerals
3.	Simplify 5p - 3q + 2p + 8q
4.	Change 5 kg to grammes
5.	Work out: $^{-}3 + {}^{-}7$
6.	Find the greatest common factor of 9 and 12
7.	Using a pair of compasses, a ruler and a sharp pencil, construct an angle of 60^0.

8.	In a class of 84 pupils, the ratio of boys to girls is 4:3 respectively. How many more boys than girls are there?
9.	Find the next number in the sequence 1, 8, 27, 64, 125, _____
10.	Solve: 4 + m = 2 (finite 5)
11.	Given that K = {a, b, c, d, e, f, g} M = {a, e, b, d}. Find n(K- M)

12.	In the diagram below, find the size of the angle marked with p 
13.	Express 72 km/h to m/s
14.	Arthur bought 300 oranges for sh. 45,000 and sold each orange at sh. 250. How much profit did he get?

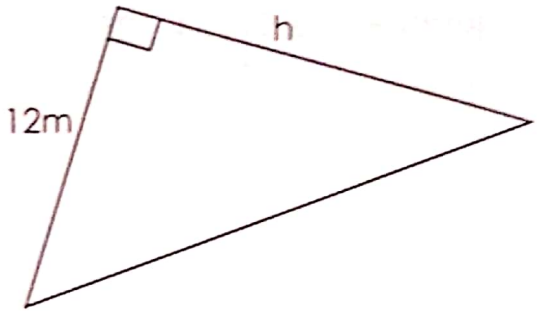
15. Find the modal frequency of 5, 6, 7, 4, 5, 4, 6, 5, 7

16. Solve the inequality $8 - 4p \leq 28$

17. Twelve girls stood in a circle. The distance between one girl and another was 1.5 metres. Work out the circumference of the circle.

18. Write the number whose scientific notation is 9.783×10^2

19. The area of a triangle is $30m^2$. Find the height of the triangle.



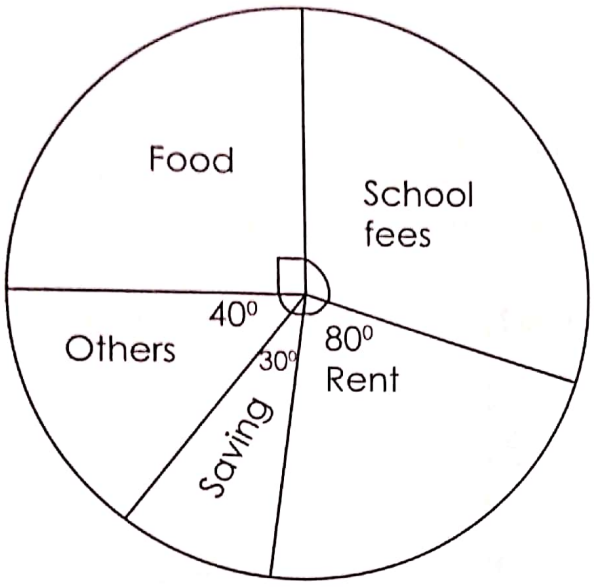
20. Given that  = 8 apples. How many apples are represented by  ?

SECTION B:

Answer **ALL** questions in this Section

Marks for each section are indicated in brackets.

21. The pie chart below shows how Adong spends her salary. Use it to answer the questions that follow.

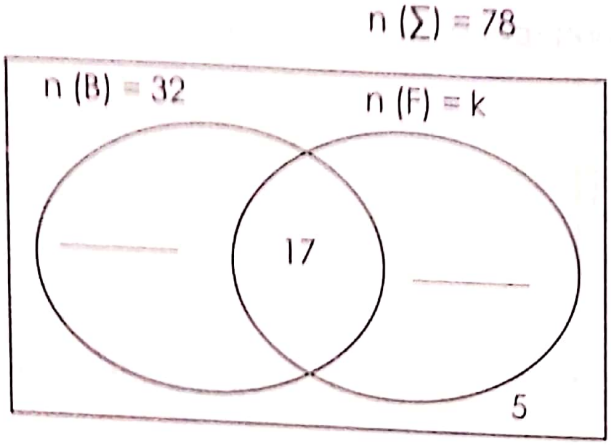


(a) If she spends sh 216,000 on fees, find her salary. **(04 marks)**

(b) What fraction does she spend on others? **(01 mark)**

22. In a class of 78 pupils, 32 like beef (B) and k like fish (F), 17 like both beef and fish while do not like any of the two.

(a) Use the above information to complete the venn diagram below.
(02 marks)



(b) If a pupil is picked at random, what is the probability that the pupil likes fish only?
(03 marks)

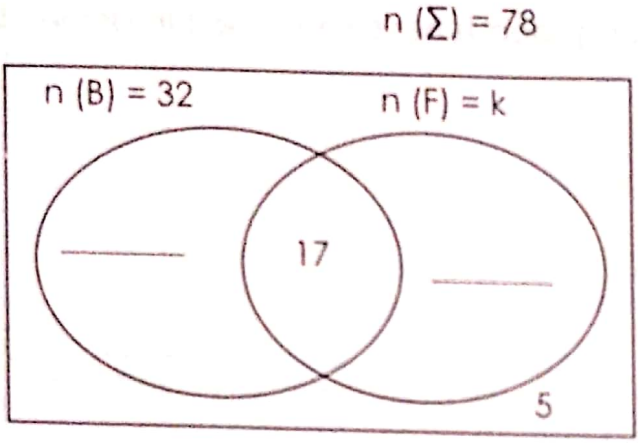
23. (a) Change $\frac{1}{4}$ to a decimal

(02 marks)

22. In a class of 78 pupils, 32 like beef (B) and k like fish (F), 17 like both beef and fish while do not like any of the two.

(a) Use the above information to complete the venn diagram below.

(02 marks)



(b) If a pupil is picked at random, what is the probability that the pupil likes fish only?

(03 marks)

23. (a) Change $\frac{1}{4}$ to a decimal

(02 marks)

(b) Work out $\frac{24.5 - 13.45}{40.85 + 14.4}$ **(03 marks)**

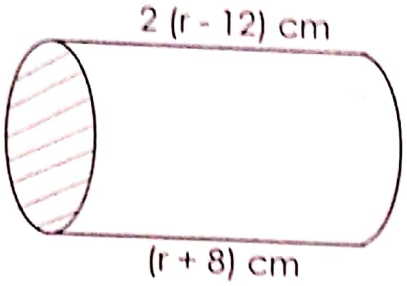
24. The table below shows the rates at which a bank buys and sells United States dollars and Kenya shillings.
Use the table to answer the questions that follow.

Currency	Buying in Ug. shs	Selling in Ug. shs
1 US dollar	3,700	3,750
1 Kenya sh	27	27.5

(a) If a tourist had 260 dollars and 800 Kenya shillings, how much money in Uganda shillings did he get from the bank? **(03 marks)**

(b) A television set costs Ug. shs 3,375,000. Find the cost in US dollars. **(02 marks)**

25. The figure below shows a cylinder. Use it to answer the questions that follow.



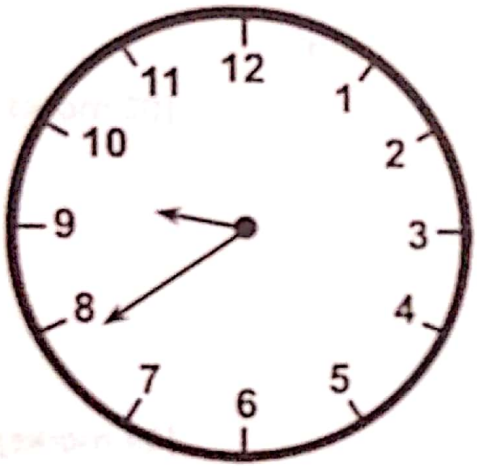
(a) Find the value of r. **(02 marks)**

(b) Given that the circumference of the shaded part is 132 cm, find the volume of the cylinder
(04 marks)
(Take π as $\frac{22}{7}$)

26. (a) Solve $\frac{8}{n} + 9 = 11$ **(02 marks)**

(b) Ritah is 28 years older than Jonah. In 5 years' time, the sum of their age will be 50 years. How old is Ritah now? **(03 marks)**

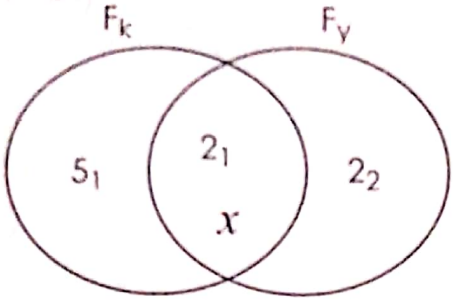
27. The diagram below shows the time of which a girl went to sleep in the evening. Use it to answer the questions that follow.



(a) Express the time inthe 24 hour clock. **(02 marks)**

(b) A motorist left town A 2 hours later and drove at 90km/h reaching town B at 12:00 midnight. Find the distance from town A to town B. **(03 marks)**

28. Use the factor diagram below to answer the following questions



If the GCF of k and y is 6. Find the value of

(i) x

(01 mark)

(ii) k

(02 marks)

(iii) y

(02 marks)

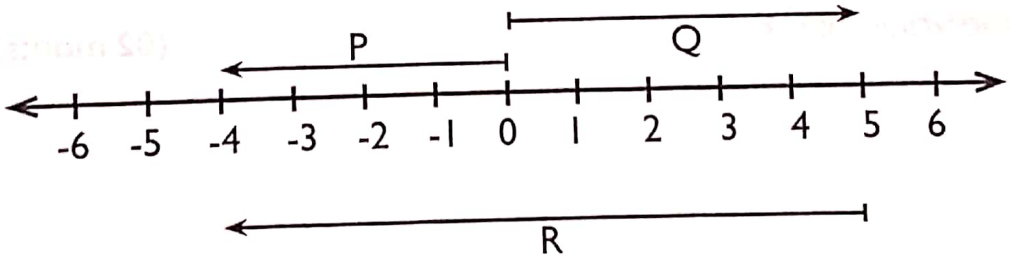
29. A motorist left village P and drove 48 km westwards to village Q. He then drove 65 km on a bearing of 230^0 from village Q to village R

(a) Draw a sketch to show the motorist's journey. **(01 mark)**

(b) Using a scale of 1 cm to represent 10 km, draw an accurate diagram to show the motorist's journey. **(03 marks)**

(c) Find the shortest distance between villages P and R **(01 mark)**

30. Use the numberline below to answer the following questions



(b) Write the integer represented by the arrows **(01 mark each)**

(i) P _____

(ii) Q _____

(iii) R _____

(c) Write a mathematical statement represented on the numberline above. **(02 marks)**

31. (a) Using a ruler, pencil and a pair of compasses construct a triangle ABC where $\overline{AB}$ = 5cm $\angle ABC = 60^{\circ}$ and $\angle BAC = 75^{\circ}$ **(04 marks)**

(b) Construct a perpendicular from C to meet AB at x. **(01 mark)**

(c) Measure line CX. **(01 mark)**

32. The sum of three consecutive even numbers is 36. If the middle number is 2m

(a) What is the value of m? **(02 marks)**

(b) Find the three numbers. **(03 marks)**

END