



**SURE KEY EXAMINATIONS BOARD
PRE-PLE EXAMINATION SERIES ONE
2022**

MATHEMATICS

Time Allowed: 2 hours 30 minutes

EMIS No.						Personal No.		

Candidate's Name:

Candidate's Signature:

School Name:

District Name:.....

Read the following instructions carefully:

1. Do not forget to write your **school** and **district name** 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 **16 printed pages** altogether
3. Answer **all** questions. **All** the working for both sections **A** and **B** must be shown in the spaces provided.
4. **All** working must be done using a **blue** or **black** ball point pen or ink. Any work done 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 easily be read may lead to loss of marks.
7. Do not fill anything in the table indicated:
"For Examiners' Use only" and boxes

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		

SECTION A: 40 MARKS

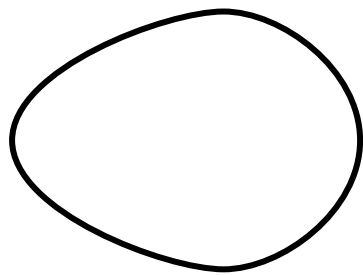
Answer **all** questions in this Section
Questions 1 to **20** carry two marks each

1. Work out: 130×3 .

2. Simplify: $4y - 3y + 2y$.

3. Find the product of $\frac{3}{4}$ and $1\frac{1}{2}$.

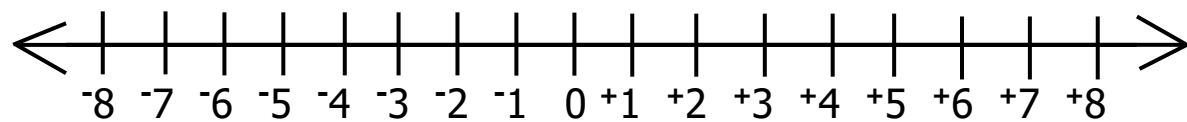
4. How many lines of folding symmetry are in the figure below?



5. For how long did a motorist take to travel a distance of 210km at a speed of 84km/h without resting from town A to town B?



6. Work out $-3 - +4$ using the number line below.



7. Change 1000_{two} to decimal base.

8. What number in its least form gives 5 as a remainder when divided by either 8 or 12?

9. Given that $A \cup B = \{1, 2, 3, 5, 7, 11\}$, $A \cap B = \{2, 3, 5\}$ and $A - B = \{11, 7\}$. Find $n(B)$.

10. A cuboidal tank 80cm by 70 cm by 120cm is $\frac{2}{3}$ full of water. Find the amount of water needed to fill the tank.

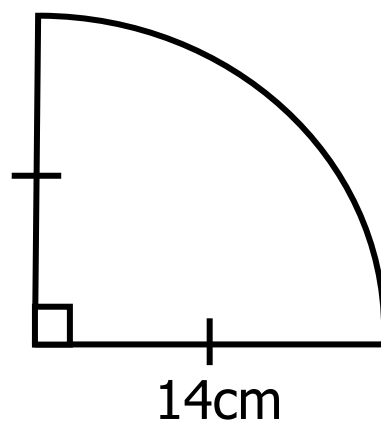


11. Change 12:43p.m to 24 hour clock system.

12. $51m$ is directly divisible by 3. If the sum of the digits is 15. Find the value of m .

13. Tamale borrowed sh.840,000 from Okecho and the two agreed on an interest rate of 7% p.a. After a certain period, Tamale realized that he owed Okecho sh.957,600. For how long did Tamale stay with Okecho's money?

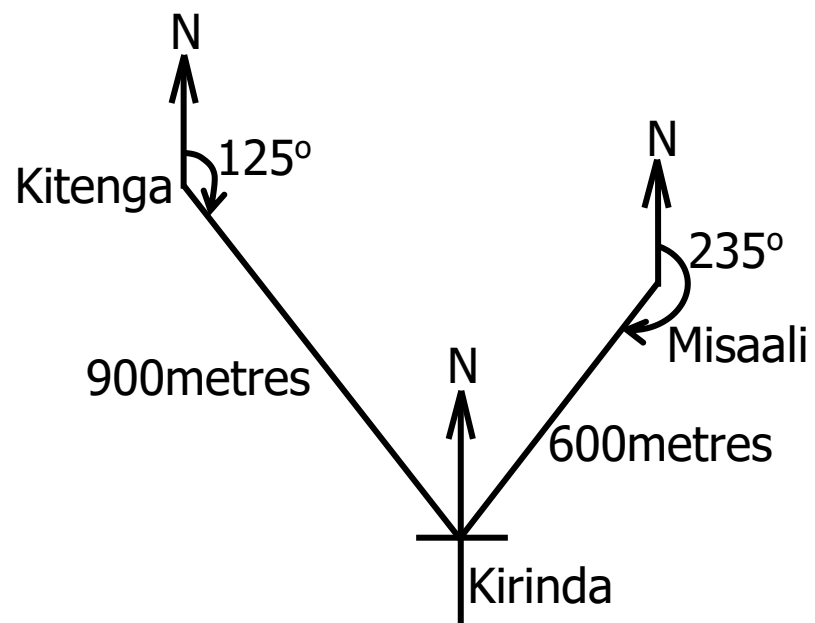
14. Calculate the perimeter of the figure below. (Use $\pi = \frac{22}{7}$)



15. Musa made a profit of sh.200 on each of the 19 plates he sold. At how much did he buy the plates if he got sh.38,000 after selling all the plates?



16. The diagram below shows the location of three villages; Kirinda, Misaali and Kitenga.



Find the bearing of Misaali from Kirinda.

17. Seven books cost sh.10,500. Find the cost of 5 similar books.
18. Ayo had 0.25 of a cake. He gave 0.4 of it to Bunjo. What fraction of the cake did Ayo remain with?

19. Calculate the exchange rate in Uganda shillings at which the bank bought 150 US dollars to give Sam Ugsh.577,500.
20. A box of mangoes weighs 20.25kg. The empty box weighs 2.25kg. If each mango weighs 30 grams, how many mangoes are in the box?



SECTION B: 60 MARKS

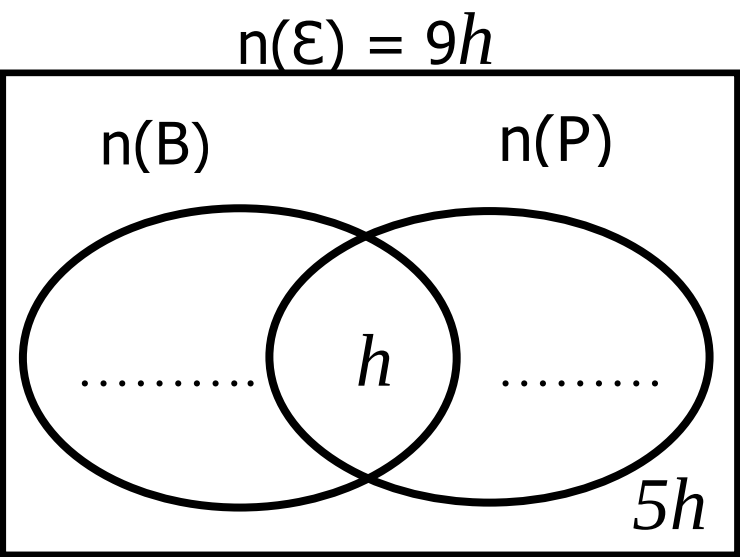
Answer **all** questions in this section

Marks for each question are indicated in brackets.

21. (a) Workout: $\frac{2x + 1}{3} = \frac{x + 8}{2}$ (03 Marks)

(b) If 4 minus $3(h - 2)$ equals 1. Find the value of h . (02 Marks)

22. In a school of $9h$ pupils, 25 pupils prefer eating Beans (B), 30 pupils prefer Peas (P), $5h$ pupils like neither of the two sauce while h pupils prefer eating both beans and peas.
- (a) Use the above information to complete the Venn diagram below. (02 Marks)



(b) Find the number of pupils who don't like peas. (02 Marks)



23. The table below shows the percentage of cattle on Mukisa's farm.

Cows	Bulls	Calves
55%	$x\%$	30%

If Mukisa remained with 60% heads of cattle after selling 192 cattle, how many less bulls than cows were on the farm?

(05 Marks)

24. A pupil spent $\frac{1}{6}$ of the pocket money on soda and $\frac{1}{4}$ of the remainder on transport and was left with Sh.36,000. How much money did the pupil have at first?

(05 Marks)



25. (a) Using a ruler, a pencil and a pair of compasses only, construct a quadrilateral MUBZ such that $MU = 6\text{cm}$ and $UB = 4\text{cm}$.
(04 Marks)

(b) Measure;

- (i) diagonal UZ cm. (01 Mark)
- (ii) angle BMU = (01 Mark)

26. (a) Solve: $2n + 4 = 2$ (finite 6) (02 Marks)

- (b) Workers on a farm are paid every after 28 days. If they received their last pay on a Thursday, on which day will they receive their next pay? (02 Marks)



27. After testing for COVID-19 at Mulago Hospital, the ratio of positive to negative to asymptomatic cases was 4:5:7 respectively. If the total number of negative and positive cases was 63,

- (a) find the number of negative cases tested at the hospital. (03 Marks)

- (b) How many more asymptomatic than positive cases were tested at the hospital? (02 Marks)

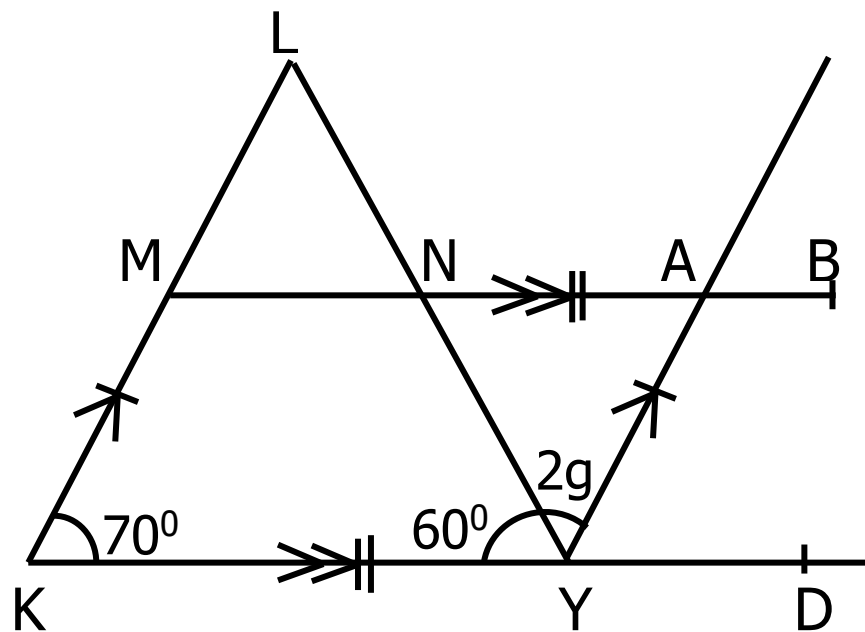
28. Mr.Surekey used poles of diameter 0.5m each placed at intervals of 4.5m to fence his flower garden shown in the figure below.



- (a) How many poles did Mr.Surekey use to fence the flower garden? (03 Marks)
- (b) If each pole costs sh.12,000 and Mr.Surekey was given a 10% discount on the total cost of all the poles, how much did he pay for the poles? (02 Marks)



29. In the diagram below, **MKYD** is a parallelogram, line **KL** is parallel to **YD**, angle **LKY** = 70° and **LYK** = 60° .

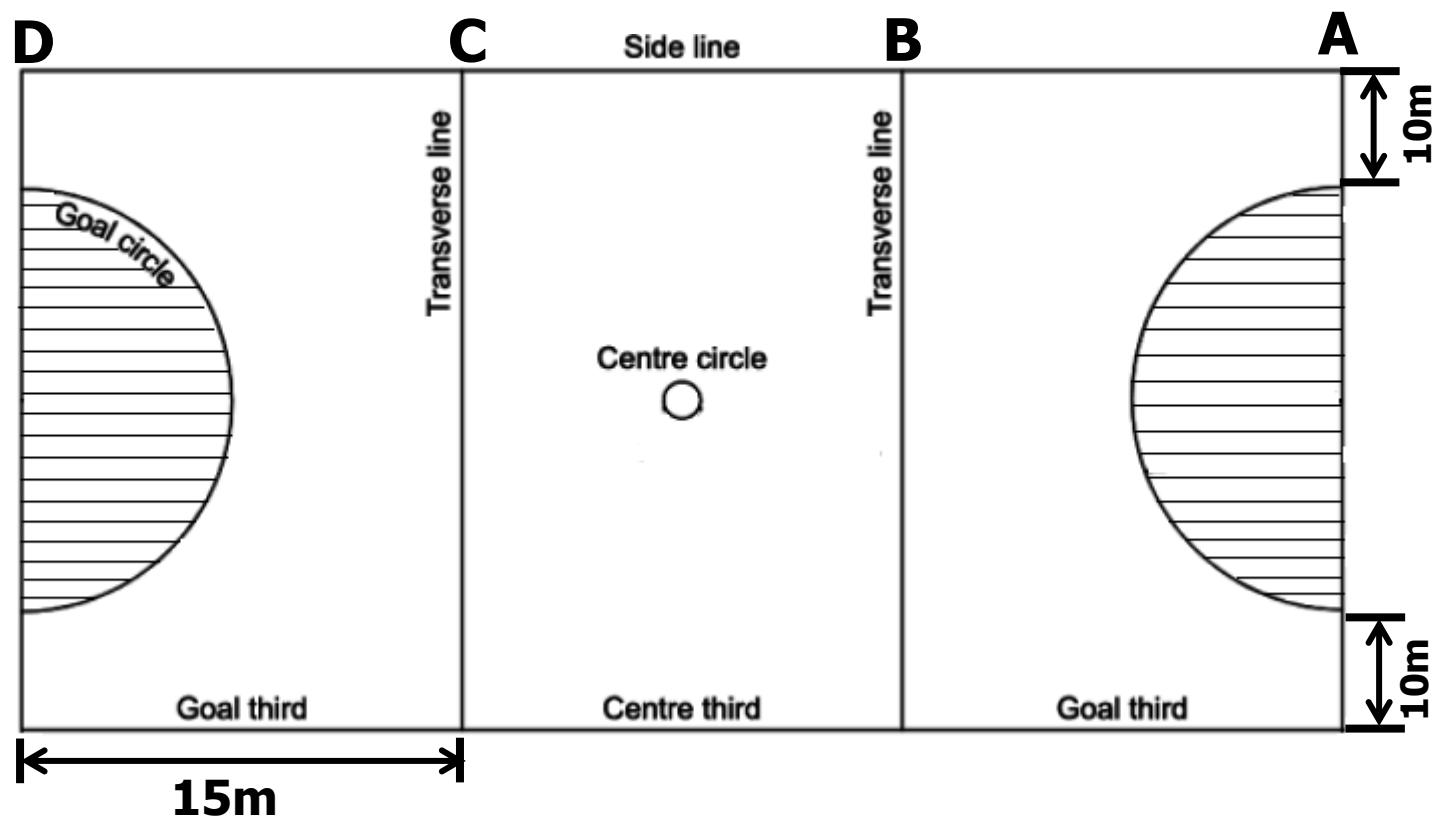


- (a) Find the value of g . (02 Marks)

- (b) Find the size the angle LNA. (02 Marks)



30. The figure below is of a Netball Pitch where Nansubuga trains from. Study it and answer the questions that follow. (Using π as $\frac{22}{7}$)



- (a) If the area covered by the two shaded goal semi-circles is 154m^2 , calculate the width of the pitch. (02 Marks)
- (b) During her training, Nansubuga runs at a speed of 45m/hr for 2 hours from Part **A** to **C**. Whenever she reaches **C**, she reduces her speed by 15m/hr to Part **D**. Find her average speed for the whole training session. (03 Marks)

(c) Calculate the area of the Netball Pitch.

(01 Mark)

31. The table below shows marks recorded by a teacher for a test that was done on a day when half of the pupils in the class was absent.

Marks	20	45	90	<i>m</i>
No.of pupils	<i>p</i>	2	1	3

- (a) If the class has 8 boys and 12 girls, calculate the value of ***p***.
(02 Marks)

- (b) Find the value of ***m*** if the mean mark of the test was 50 Marks.
(03 Marks)



32. (a) Complete the table below using the equation, $y = x + 1$.
(04 Marks)

x	-3		0	
y		5		2

- (b) Plot the points in the table above on the co-ordinates graph below and join them to form a straight line. (02 Marks)

