ST. FRANCIS JUNIOR SCHOOL - BUDDO

PRIMARY SEVEN DIRECTOR'S SET TWO

2023

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. Workout. $191_{ten} \times 14_{ten}$.

2. Write 9999 in words.

.....

.....

3. Given that Set S = {first 5 even numbers} and
Set V = {integers between $^{-}5$ and $^{+}5$}. Find n(S∩V).

4. Solve for m: $\frac{2}{m} = \frac{3}{6}$.

5. Find the missing numbers in the sequences below:

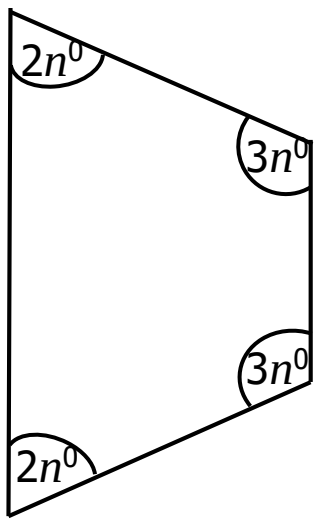
36, 49, 64, ..., 100

1, 8, ..., 64, 125

6. Workout:

kg	g
3	723
+ 4	345

7. Find the value of n in the figure below.



8. Musa went to sleep at 1930hrs and did not wake up until 0830hrs. For how long did Musa sleep?

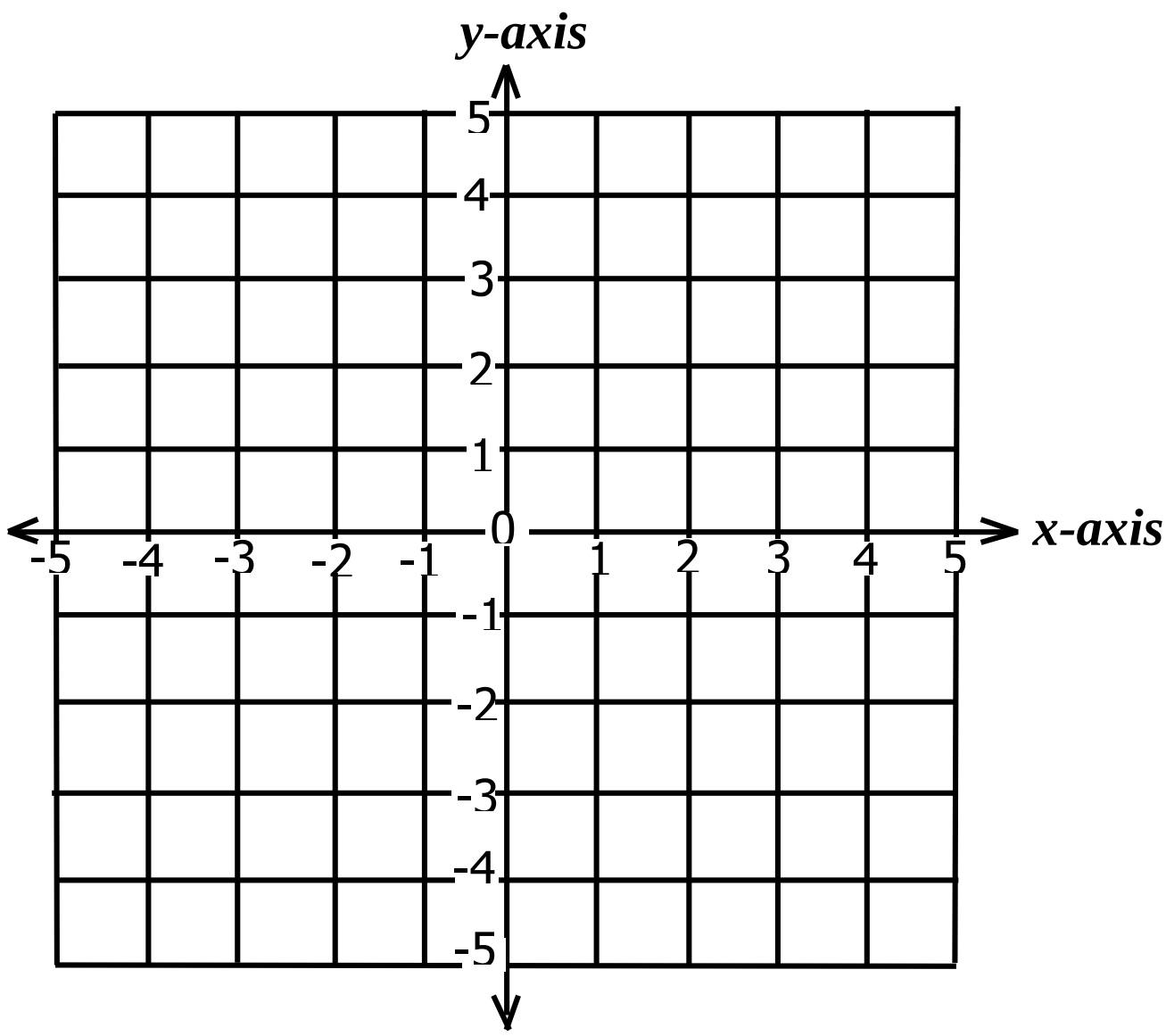
9. A tourist left town K and travelled 55km westwards to town L. He then turned on a bearing of 215^0 and travelled to town M which is a distance of 65km. Using a pencil, a ruler and a protractor only. Draw a sketch diagram to show the tourist's journey.

Turn Over

10. If a = 49, b = 39 and c = 61. What is the value of (a x b) + (c x a) using distributive property?

11. George bought 120 shares from Surekey Bank at a simple interest of 30% per year. Find his total interest after $3\frac{1}{2}$ years if each share costs Sh.60,000.

12. On the graph below, plot the points, A(¯2, ⁺3), B(⁺5, ⁺3), C(¯2, ¯1) and D(⁺1, ¯1). Then join them to form a right angled trapezium.



13. Express $\frac{9}{11}$ as a recurring decimal.

14. The Lowest Common Multiple (LCM) of x and y is 48 and their Greatest Common Factor (GCF) is 8. Find the value of y if $x = 16$.

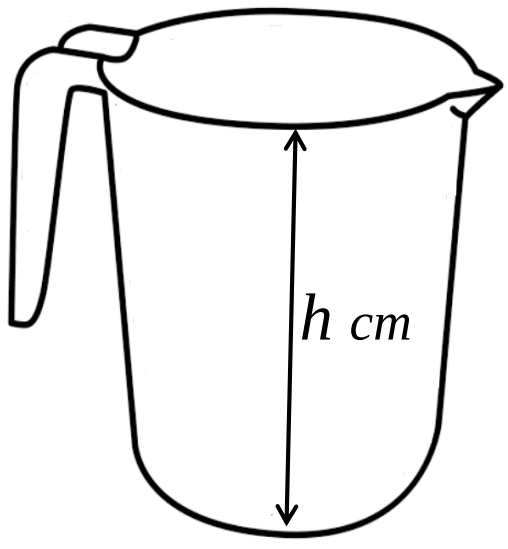
15. The ratio of boys to girls in a class is 5:3. If there are 20 more boys than girls in the class, find the total number of pupils in the class.

16. Mary bought 8 dresses each at Sh.7,000. How much money did she spend on 6 dresses?

Turn Over

17. The diagrams below show two different containers which hold the same amount of milk when completely full. Container **Z** has a base area of 154cm^2 and a height of 28cm.

Container Y



Container Z

Calculate the height (h) of container **Y** if it has a base area of 308cm^2.
(Use π as $\frac{22}{7}$)

18. Given that 1 US dollar ($) costs Uganda shillings (Ug.sh) 3,672 and 1 Kenyan shilling (Ksh) costs Ug.sh 36, find the cost of 1 US dollar in Kenya shillings.

19. Solve for p: 2p + 4 = 2 (finite 6)

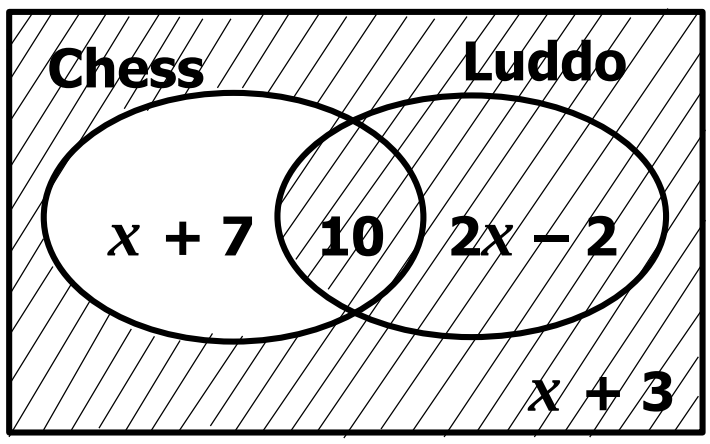
20. Alinda's stride is 1.1m long. How many strides will Alinda make to cover a distance of 33km?

SECTION B: 60 MARKS

Answer **all** questions in this section

Marks for each question are indicated in brackets.

21. Study the Venn diagram below and use it to answer the questions that follow.



(a) Describe the unshaded region in the above Venn diagram. (01 Mark)

(b) Given that the number of members represented in the shaded region of the Venn diagram doubles that in the unshaded. How many pupils played only one game? (03 Marks)

22. (a) Find the value of m if $m^2 = 71_{nine}$ (02 Marks)

(b) Express 134_{five} as a base three numeral. (03 Marks)

23. Kayongo, Sserugo and Opio are running a 10,000 metre race, Kayongo completes his first lap after 60 seconds, Opio completes his first lap after 75 seconds while Sserugo completes his after 90 seconds.

(a) When will they all be at the starting point together again if running at a constant speed throughout the race? (02 Marks)

(b) At what speed is Sserugo running in Kilometers per hour? (03 Marks)

24. (a) What number has been expanded to give; (03 Marks)

$(3 \times 10^{4}) + (9 \times 10^{1}) + (4 \times 10^{-2}) + (2 \times 10^{-3})$?

(b) Workout the product of the value of 3 and the place value of 2 in the above expanded number. (02 Marks)

25. Okoth scored the following marks in his homework exercises.

2, 5, 7, 3, 10,

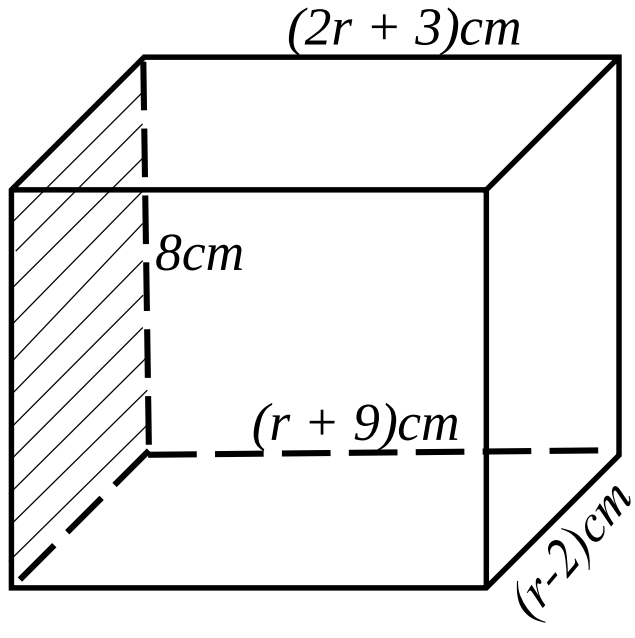
7, 11, 8, 3

(a) Find his median mark. (01 Mark)

(b) Find the mean mark of the homework exercises. (02 Marks)

(c) Find the probability that Okoth scored a mark above his mean mark. (02 Marks)

26. Study the figure below and use it to answer the questions that follow.



(a) Calculate the value of r in the above figure. (02 Marks)

(b) Workout the area of the shaded face on the above figure. (02 Marks)

(c) Workout its volume in cubic centimetres. (02 Marks)

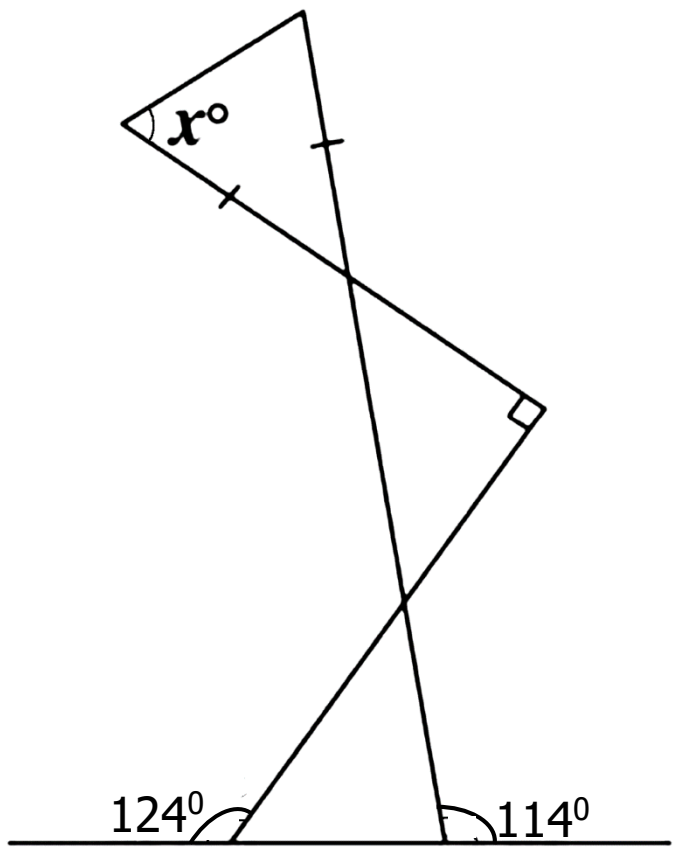
27. (a) Using a ruler, a pencil and a pair of compasses only, construct a rhombus **SRVY** where line **SR** = 8cm, angle **SRV**=120^0**.**

(04 Marks)

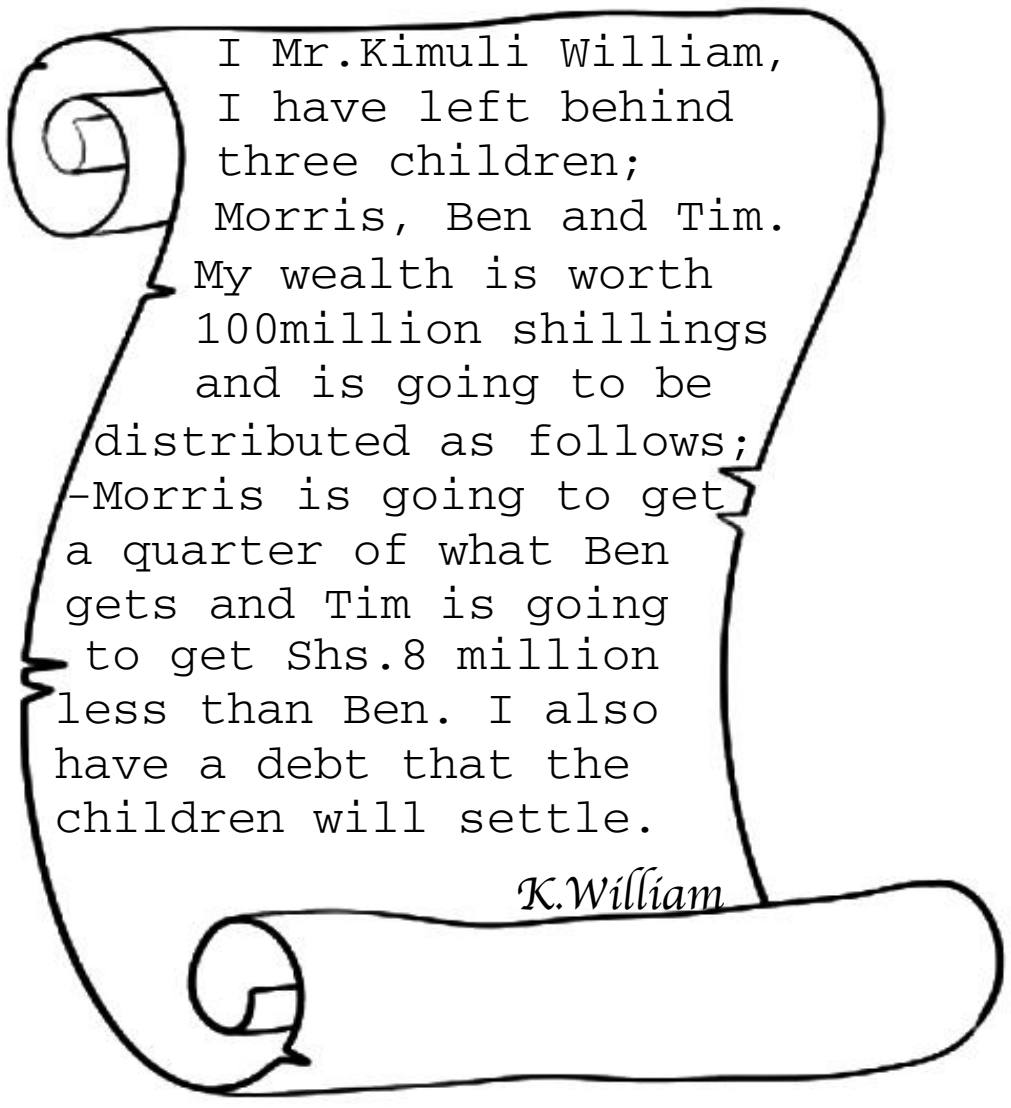
(b) Measure the length of diagonal **SV.** ……**..**cm (01 Mark)

28. (a) The interior angle of a regular polygon is 36^0 more than its exterior angle. Name the polygon. (03 Marks)

(b) In the figure below, find the value of x. (03 Marks)



29. Below is a copy of Mr.William's will left behind before his death. Read it carefully and help distribute his wealth among his children.



(a) How much wealth did each child receive as his share? (03 Marks)

(b) If each child is to contribute 10% on his share to settle their father's debt, how much was the debt? (02 Marks)

30. The table below shows a ferry's journey across different Islands and ports on Lake Victoria. Study it carefully and answer the questions that follow.

Island or Port	**Arrival Time**	**Departure Time**	**Fares (Shs)**
Luzira	.....	0900 hrs	.....
Kome	1230 hrs	1305 hrs	3,500
Buvuma	1545 hrs	1620 hrs	1,800
Buyange	1740 hrs	1800 hrs	1,200
Bukasa	1910 hrs	1940 hrs	1,500
Kalangala	2125 hrs	.....	2,200

(a) At what time did the ferry arrive at Buvuma Island in 12-hour clock system? (01 Mark)

(b) How many minutes did it take the ferry to travel from Luzira to Bukasa? (02 Marks)

(c) How much did Ms.Sarah with her three friends pay for a trip from Kome to Kalangala? (02 Marks)

31. Godfrey went shopping and bought the following items.

2 bars of soap for Sh.2.800 each.
1½kg of sugar for Sh.4,800 per kg.
1 tin of Blue Band for Sh.4,500.
$\frac{3}{4}$ kg of beef for Sh.10,500.

(a) Find the cost of a kilogram of beef. (02 Marks)

(b) Calculate Godfrey's total expenditure. (03 Marks)

32. A water tank is $\frac{2}{3}$ full of water. When 600 litres of water are added, the tank becomes $\frac{5}{6}$ full. How many litres of water does it hold when it is $\frac{3}{4}$ full? (04 Marks)

END