



# HORMISDALLEN SCHOOL - GAYAZA

## PRE- P.L.E EXAMINATION SET 7

### MATHEMATICS

*Time allowed: 2 hours 30 minutes*

NAME: \_\_\_\_\_

INDEX NUMBER: 5 3 7 9 9 5 \_\_\_\_\_

Signature: \_\_\_\_\_

Stream: \_\_\_\_\_

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5. Unnecessary changes of work may lead to **loss** of marks.
6. Any handwriting that cannot easily be read may lead to **loss of marks**.
7. Do **not** fill anything in the boxes indicated:

<b>A</b>	
<b>B</b>	
<b>TOTAL</b>	

FOR EXAMINER'S USE ONLY		
Qn. No.	MARKS	EXRS' NO.
1 – 5		
6 – 10		
11 – 15		
16 – 20		
21 – 22		
23 – 24		
25 – 26		
27 – 28		
29 – 30		
31 – 32		

*Turn over*

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**SECTION A (40marks)**

1. **Workout:**  $3 \overline{)2}$

$$\begin{array}{r} \\ \times 3 \\ \hline \end{array}$$

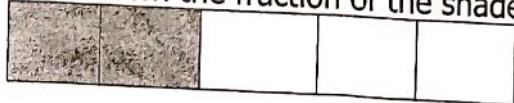
2. Write in figures: **Thirty eight thousand, fifty.**

3. **Simplify:**  $6a - 4a + a$

4. Write **54** in Roman numerals.

5. **Simplify:**  $+8 - -2$

6. Write down the fraction of the shaded part of the drawing below.



7. Change 750 centimetres into metres.

8. Using a pair of compasses, a ruler and a pencil only, draw an angle of  $60^\circ$  in the space provided.

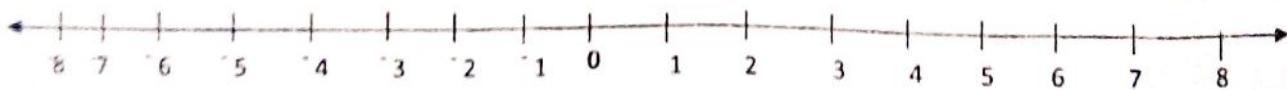
9. Given set  $K = \{2, 7, 10, 17\}$  and set  $L = \{5, 6, 7, 11, 15\}$ , Find  $K \cap L$ .

10. In a basket, 4 rotten eggs are mixed up with 3 good eggs. If an egg is picked at random from the basket, what is the probability of picking a good egg?

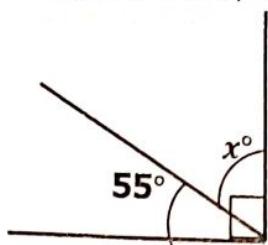
11. **Workout:**  $2.0 \div 0.5$

12. **Simplify:**  $\frac{5}{9} - \frac{2}{9}$

13. On the number line below, show  $4 \times 2$



4. In the diagram below, find the value of  $x$ .

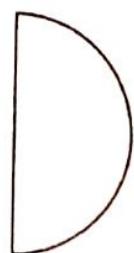


15. Five pupils scored the following marks in a Mathematics test: **55, 72, 61, 93 and 60.**

Find the median mark.

16. It started raining at 9:45 a.m. and stopped at 1:25 p.m. For how long did it rain?

17. How many lines of folding symmetry does the figure below have?



18. Find the next number in the following sequence: 1, 8, 27, 64, \_\_\_\_\_

19. Given that  $P = -4$ ,  $q = 3$  and  $c = -2$ , find the value of:  $\frac{pq}{c}$ .

20. **Solve:**  $2(3x - 6) = 24$

### **SECTION B**

21. At Mbale Tower Primary School, two bells ring at intervals of 40 minutes and 50 minutes to change lessons for lower and upper primary respectively. How many lessons will each section have before the bells ring together?

22. A man spends  $\frac{1}{3}$  of his salary on food,  $\frac{1}{4}$  of it on rent  $\frac{1}{12}$  on entertainment and saves the rest. If the money saved and for entertainment amounts to sh. 30,000, find his total salary. **(5mks)**

23. At a book shop, a ruler costs sh. 1500 less than that of a set and a book costs twice the cost of a ruler. If Tom bought one item on each of them and paid sh. 7,500 altogether.

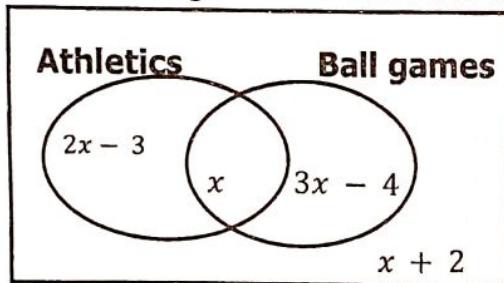
(a) Find the cost of a set

(3marks)

(b) How much money can one pay for 8 books?

(2 marks)

24. Study the Venn diagram below and use it to answer the questions.

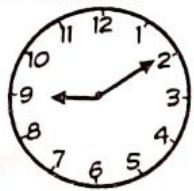


(a) If the number of pupils who participated in ball games only outnumber those pupils who participated in athletics only by 3, find the value of  $x$ . (3marks)

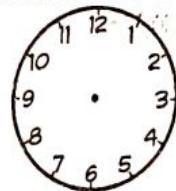
(b) How many pupils never participated in ball games? (2marks)

25. (a) A mathematical test started at the time shown on the clock face (A) in the morning. If it lasted for  $2\frac{1}{2}$  hrs, represent the ending time on the clock face (B) (2marks)

Clock face A



Clock face B



- (b) Change 43 hours to minutes. (2mks)

26. (a) Using a ruler, pencil and pair of compasses only, construct a triangle ABC where  $\angle ABC = 60^\circ$  and  $\angle BAC = 45^\circ$  and line AB = 8cm. (5 marks)

- (c) Drop a perpendicular bisector from point C to meet line AB at X. (1mark)

Measure CX.

(1mark)

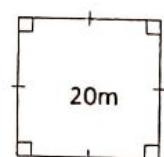
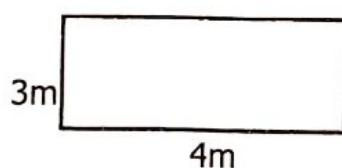
27. (a) Given below is a table showing the buying and selling of currencies at fore Bureau.

Currency	Buying	Selling
Us\$1	Ugsh. 3,500	Ugsh. 3,700
£ 1	Ugsh. 4,300	Ugsh. 4,450
K sh 1	Ugsh.39	Ugsh.40

(a) A tourist arrived in Uganda with 800 **US** dollars. How much money did he get in Uganda shillings at the forex bureau? **(2mks)**

(b) A woman bought a T.V set from Kenya at Ksh. 11100. Find the cost of the same T.V set in **US** dollars **(2marks)**

28. Below is Faizo's sitting room floor that is to be covered by square tiles of length 20cm.



(a) How many tiles are needed to cover the floor? **(2mks)**

(b) If a box contains 25 tiles and each box costs sh. 72,000, find how much it will cost Faizo to cover the floor with square tiles?

29. A salesman at a cement depot has 500 bags of cement each weighing 50kg.

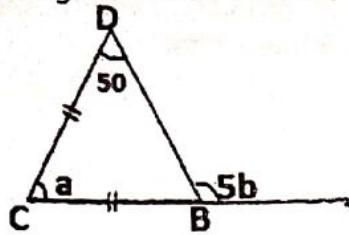
(a) Find the total weight of the bags in kg. **(1mk)**

(b) How many tonnes of cement does he have in store? **(2mks)**

(c) If he uses a pick-up to carry 5 tonnes per trip, find the number of bags of cement the pick-up will carry in one trip. **(1mk)**

(d) Find the number of trips the pick-up will make to transport the whole cement from the factory to his hardware shop. **(2mks)**

30. Use the figure below to answer the questions that follow.

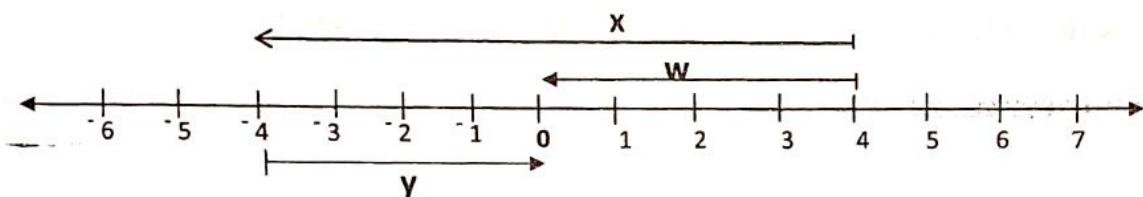


(a) Find the value of;

(i)  $\angle a$

(ii)  $\angle b$

31. Use the number line below to answer questions that follow.



(a) Identify the integer represented by the letters. (1mk)

(i) Y

(ii) X

(iii) W

(b) Write the mathematical sentence represented on the number line above. (1mk)

32. Mr. Kizza spent his salary as follows.

**Fees** sh. 45,000

**Clothing** sh. 60,000

Medical care sh. 30, 000 and was left with the same amount as that spent on fees.

Use the above information to construct well labeled Pie- chart of radius 4cm. (**6mks**)

**END**



# HORMISDALLEN SCHOOL - GAYAZA

## PRE- P.L.E EXAMINATION SET 6

### MATHEMATICS

Time allowed: 2 hours 30 minutes

NAME: NANKUMBA MELLANIE

INDEX NUMBER: 

5	3	7	9	9	5	4	4	4
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Signature: Nankumba Mellanie

Stream: J A Y S

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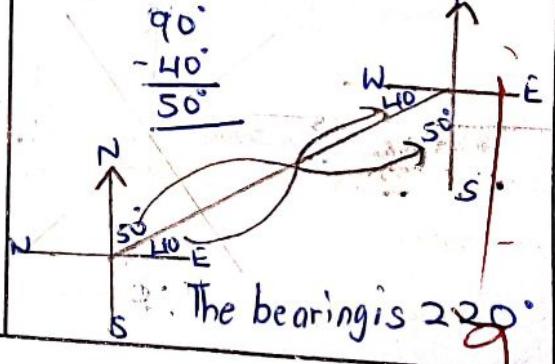
A	
B	
<b>TOTAL</b>	

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Turn over

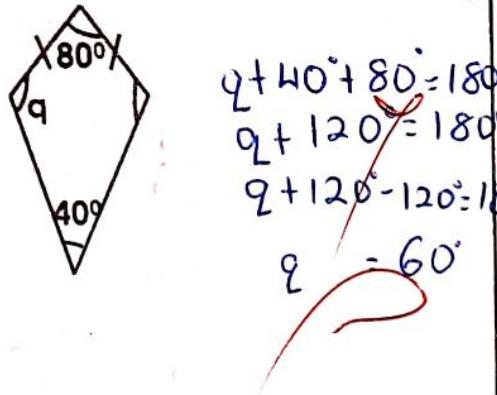
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**SECTION A (40MARKS)**

1.	Work out: $12 \times 4$ $  \begin{array}{r}  12 \\  \times 4 \\  \hline  48  \end{array}  $	Expand 915 using place values. $  \begin{array}{r}  915 \\    \quad   \quad   \\  \text{Hundreds} \quad \text{Tens} \quad \text{Ones} \\  (9 \times 100) + (1 \times 10) + (5 \times 1) \\  900 + 10 + 5  \end{array}  $
3.	Simplify: $3y^5 - 5y^5 + 3y^5$ $  \begin{array}{r}  (3y^5 + 3y^5) - 5y^5 \\  6y^5 - 5y^5 \\  y^5  \end{array}  $	Work out: $1\frac{2}{5} \times 1\frac{1}{2} \div 3\frac{1}{2}$ $  \begin{array}{r}  (1\frac{1}{5} \div 3\frac{1}{2}) \times 1\frac{1}{2} \\  (\frac{7}{5} \div \frac{7}{2}) \times 3\frac{1}{2} \\  \frac{7}{5} \times \frac{2}{7} \times \frac{7}{3} \\  1 \times 1 \times 3 \\  3  \end{array}  $
5.	Ritah scored the following marks: 8, 9, 6, 4 and $x$ . Find the value of $x$ if her average score was 6. $  \begin{array}{r}  \text{Sum} = \text{Av} \times \text{no} \\  = 6 \times 5 \\  = 30  \end{array}  $	A truck carries 4000kg of cement. Find how many 50kg bags can be carried by the truck? $  \begin{array}{r}  4000 \text{ kg} \\  \div 50 \text{ kg} \\  = 80 \text{ bags}  \end{array}  $
7.	<b>solve the inequality:</b> $3x + 12 < 5x - 2$ $  \begin{array}{r}  3x + 12 < 5x - 2 \\  5x - 2 < 3x + 12 \\  5x - 2 + 2 < 3x + 12 + 2 \\  5x < 3x + 14 \\  5x - 3x < 3x - 3x + 14 \\  2x < 14 \\  x < 7  \end{array}  $	The direction of Soroti from Kampala is N40°E. Find the bearing of Kampala from Soroti.  <p>The bearing is 220°.</p>

1  
12

10. Find the size of angle marked q in the diagram below:



- Given that set **A** = {Factors of 6} and Set **B** = {Prime factors of 6}. Find  $A \cap B$ .

$$1 \times 6 = 6$$

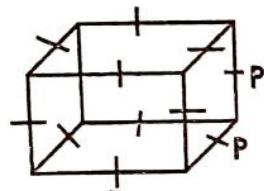
$$2 \times 3 = 6$$

$$F_6 = \{1, 2, 3, 6\}$$

$$P F_6 = \{2, 3\}$$

$$A \cap B = \{2, 3\}$$

11. Given that the total surface area of the diagram below is  $150\text{cm}^2$ . Calculate the value of P.



$$S + S + S = 150$$

$$P + P + P = 150$$

$$\frac{3}{8}P = 150$$

$$P = 50$$

13. Express 80cm as a fraction of 2m.

$$1\text{m} = 100\text{cm}$$

$$2\text{m} = 2 \times 100\text{cm} = 200\text{cm}$$

$$\text{For Fraction: } \frac{80}{200} = \frac{2}{5}$$

12. Solve for K:  $7 - 1(K + 3) = 2$ .

$$7 - K - 3 = 2$$

$$K - 7 - 3 = 2$$

$$K - 4 = 2$$

$$K - 4 + 4 = 2 + 4$$

$$K = 6$$

$$K = -6$$

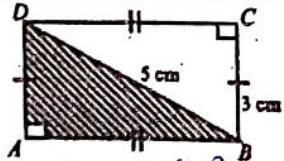
14. A trader bought 30 eggs at sh. 7500. Find how much he must sell each egg if he is to make a profit of sh. 1500.

$$1\text{egg} = \frac{250}{1000}$$

$$= \text{sh. } 2.50$$

$\therefore$  He must sell each egg at sh. 2.50

15. Find the area of the shaded part in the figure below.



$$a^2 + b^2 = c^2$$

$$3^2 + 5^2 = c^2$$

$$9 + 25 = c^2$$

$$c^2 = 34$$

$$a^2 + b^2 = c^2$$

$$a^2 + (3 \times 3) = (5 \times 5)$$

$$a^2 + 9 = 25$$

$$a^2 = 16$$

$$a = 4$$

$$A = \frac{1}{2} \times b \times h$$

$$= \frac{1}{2} \times 4 \times 3$$

$$= 6\text{cm}^2$$

16. By increasing 2000 by m% it becomes 2400. Calculate the value of m.

$$\frac{2000 \times m}{100} = 2400$$

$$= \frac{20 \times m}{20} = \frac{120}{20}$$

$$\underline{\underline{m = 120}}$$

17. Given that each interior angle of a regular polygon is equal to  $1\frac{2}{3}$  right angles. Find the size of the exterior angle.

$$\frac{120}{360} \times 4$$

$$120 \times 4$$

$$\underline{\underline{480}}$$

18. The cost of 3 pens is sh. 12,000. Find how many pens will Tom buy with sh. 36,000.

$$\begin{array}{r} 4000 \\ \hline \text{sh. } 12000 \\ \hline 3 \\ \hline \end{array}$$

sh. 4000 → 1 pen

$$\begin{array}{r} 36000 \\ \hline \text{sh. } 4000 \\ \hline 9 \end{array}$$

$$= \underline{\underline{9 \text{ pens}}}$$

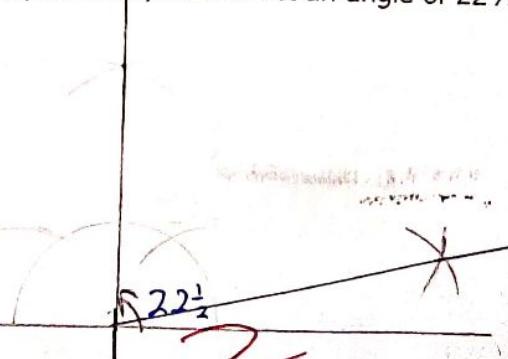
19. Work out:  $45_{\text{seven}} + 22_{\text{seven}}$

$$\begin{array}{r} 145_{\text{seven}} \\ + 22_{\text{seven}} \\ \hline 100_{\text{seven}} \end{array}$$

$$\begin{array}{r} 7 \div 7 = 1 \text{ r } 0 \\ 7 \div 7 = 1 \text{ r } 0 \end{array}$$

20. Using a pair of compasses, a ruler and a pencil only. Construct an angle of  $22\frac{1}{2}^\circ$

$$\begin{array}{l} 11 \\ 22 + 1 \\ 22 + 1 \\ 11 + 1 \\ = 25 \\ 12 \end{array}$$



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**SECTION B (60MARKS)**

21. Given that: A = {Whole numbers less than 10}.  
 B = {Odd numbers less than 10}.  
 C = {Prime numbers less than 10}.

a) Find members in set:

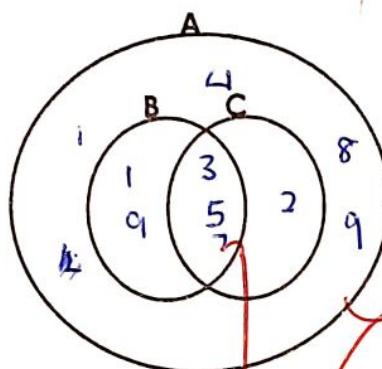
(3mrks)

A:  $\{1, 2, 3, 4, 5, 6, 7, 8, 9\}$  ~~9~~

B:  $\{1, 3, 5, 7, 9\}$  ~~9~~

C:  $\{2, 3, 5, 7\}$  ~~9~~

b) Complete the venn diagram below using the sets above: (2mrks)



22. Ronald, Betty and Ketrah shared money in the ratio of  $3 : x : 2$  respectively. If Ronald got sh. 1,000 more than Ketrah and their total amount shared was sh. 10,000.

(a) Find the value of x

(3marks)

Ronald	Betty	Ketrah	total
3	x	2	$5+x$

$$5+x = \text{sh. } 10,000$$

$$5 - 5+x = \text{sh. } 10,000 - 5$$

$$x = \text{sh. } 5000$$

$$3x + 2x = \text{sh. } 10,000$$

$$5x = \text{sh. } 10,000$$

$$\frac{5}{\$}x = \text{sh. } 10,000$$

$$x = \text{sh. } 2000$$

(b) How much money did Betty get?

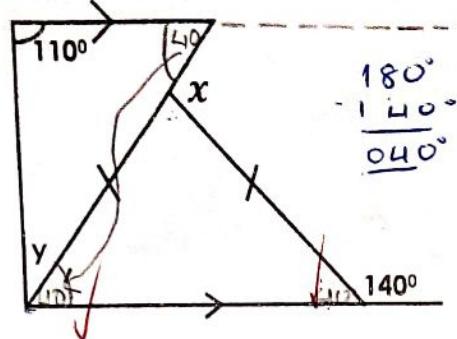
(2marks)

$$x = \text{sh. } 2000$$

Betty got sh. 2000

3

Use the diagram below to find the values of angles marked x and y. (4mrks)



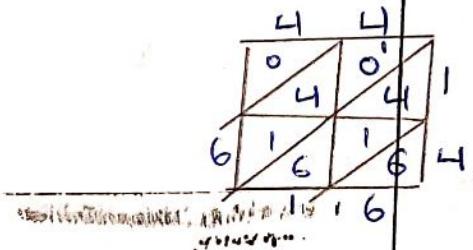
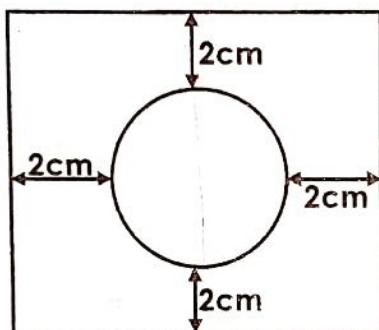
$$\underline{y + 40^\circ = 90^\circ}$$

$$y = 50$$

$$x + 140^\circ = 180^\circ$$

$$x = 4^{\circ}P$$

24. A square metallic sheet of side 18cm was cut to remove a circular plate as shown below.



- a) Calculate the area of the circular plate cut out. (Take  $\pi = 22$ ) (3mrks)

$$\begin{aligned}
 & A = \pi r^2 \\
 & = 22 \times \frac{1}{4} \text{cm} \times 14 \text{cm} \\
 & = 22 \times 2 \text{cm} \times 14 \text{cm} \\
 & = 44 \text{cm} \times 14 \text{cm} \\
 & = 616 \text{cm}^2
 \end{aligned}$$

- b) Calculate the area of the metal which remained after the removal of the circular plate. **(2mrks)**

$$\begin{aligned}A &= L \times W \\&= 4 \text{ cm} \times 4 \text{ cm} \\&= \underline{16 \text{ cm}^2}\end{aligned}$$

Length  
2cm + 2cm  
4cm

$$\begin{array}{l} \text{width} \\ \hline 2\text{cm} + 2\text{cm} \\ \hline 4\text{cm} \end{array}$$

25. Daphine has  $(3d - 4)$  books. Saad has  $(d+1)$  fewer books than Daphine. Jane has  $(d+10)$  more books than Saad. The total number of books for the pupils is 28. Find the number of books Jane has.

(5mrks)

$$(3d - 4) - (d + 1) + (d + 10) = 28$$

$$3d - 4 - d - 1 + d + 10 = 28$$

$$3d - d + d + 10 - 4 - 1 = 28$$

$$3d + 6 = 28$$

$$3d + 6 - 6 = 28 - 6$$

$$\frac{3}{3}d = \frac{22}{3}$$

$$d = 7\frac{2}{3}$$

$$\begin{array}{r} 23 \\ + 30 \\ \hline 53 \end{array}$$

$$\begin{array}{r} \text{Jane} \\ = 7\frac{2}{3} + 10 \\ \hline \end{array}$$

$$\begin{array}{r} 23 + 10 \\ \hline 3 \end{array}$$

$$\text{L.C.M.} = 3$$

$$\left(\frac{23}{3}\right) + \left(\frac{10}{3}\right)$$

$$\left(\frac{23}{3} \times 1\right) + \left(\frac{10}{3} \times 3\right)$$

$$\frac{23}{3} + \frac{30}{3}$$

$$\frac{23 + 30}{3}$$

$$\frac{53}{3} = 17\frac{2}{3}$$

26. Pupils of P.7 in a certain school were asked their favourite Sodas when they went for a Picnic in Botanical Gardens as the table below indicates the details.

Type of soda	Novida	Pepsicola	Cocacola	Krest	Fanta	Mirinda
No. of children	10	6	12	18	10	16

Use a radius of 4cm to present the above information on a well labeled pie-chart.  
(6mrks)

$$\begin{array}{l} \text{Total} \\ 10 + 6 + 12 + 18 + 10 + 16 \\ 72 \\ \text{Total poles} \end{array}$$

$$\begin{array}{l} \text{Novida} \\ 10 \times 360 \\ 360 \\ 82 \end{array}$$

$$\begin{array}{l} \text{Total} \\ 10 + 6 + 12 + 18 + 10 + 16 \\ 72 \end{array}$$

$$\begin{array}{l} \text{Novida} \\ 10 \times 360 \\ 72 \\ 10 \times \frac{5}{72} \\ 100^{\circ} \end{array}$$

$$= 60^{\circ}$$

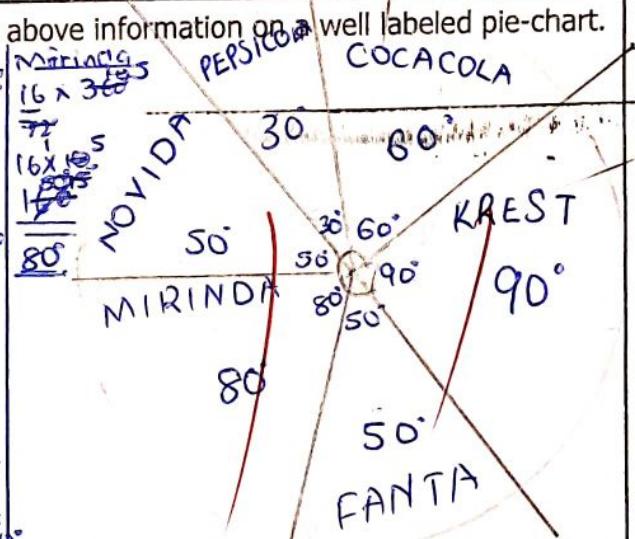
$$\begin{array}{l} \text{Pepsicola} \\ 6 \times 360 \\ 72 \\ 6 \times \frac{5}{72} \\ 50^{\circ} \end{array}$$

$$\begin{array}{l} \text{Cocacola} \\ 12 \times 360 \\ 72 \\ 12 \times \frac{5}{72} \\ 50^{\circ} \end{array}$$

$$\begin{array}{l} \text{Krest} \\ 18 \times 360 \\ 72 \\ 18 \times \frac{5}{72} \\ 50^{\circ} \end{array}$$

$$\begin{array}{l} \text{Fanta} \\ 10 \times 360 \\ 72 \\ 10 \times \frac{5}{72} \\ 50^{\circ} \end{array}$$

$$\begin{array}{l} \text{Mirinda} \\ 16 \times 360 \\ 72 \\ 16 \times \frac{5}{72} \\ 50^{\circ} \end{array}$$



27. A modern bakery has been built 3.3km away from the nearest power line. If the distance between electric poles required is 50 metres.

a) Find how many poles are required to supply power to this bakery.

(3mrks)

$$1 \text{ km} = 1000 \text{ m}$$

$$3.3 \text{ km} = \frac{3.3}{1000} \times 1000 \text{ m}$$

$$= 3.3 \times 1000 \text{ m}$$

$$= 3300 \text{ m}$$

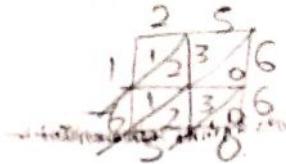
$$\begin{array}{r} 66 \\ 3300 \\ \hline 0 \end{array}$$

66 poles.

- b) If UMEME sells each pole at sh. 250,000. Calculate how much money will it cost the bakery to get the required number of poles. (2mrks)

$$\begin{array}{r}
 \text{sh. } 250,000 \\
 \times \quad 66 \\
 \hline
 \text{sh. } 16,500,000
 \end{array}$$

~~sh. 16,500,000~~



28. A taxi carrying 14 passengers and a driver, all of the same weight. If the taxi with every body on the board weighs 2400kg and the empty taxi weighs 1500kg. Find what will be the weight of the taxi if 7 passengers get off. (5mrks)

$$\begin{array}{r}
 \text{EMPTY} \\
 \underline{1500\text{kg}} \\
 \text{A person} \\
 \underline{840\text{kg}} \\
 \text{160kg} \\
 = \underline{160\text{kg}} \\
 \begin{array}{r}
 ^{\circ} 17 \\
 1500\text{kg} \\
 - 980\text{kg} \\
 \hline
 820\text{kg}
 \end{array}
 \end{array}$$

29. a) Given that Today is Monday. What day of the week was it 68 days ago? (5mrks)

mon	Tue	Wed	Thur	Fri	Sat	Sun
$1 - 68 = - 67 \pmod{7}$	2	3	4	5	6	0

$$1 - (68 \div 7) = (68 \mod 7)$$

$$(7+1) - 5 = - (mod 7)$$

$$8 - 5 = 3 \pmod{7}$$

3 stands for Wednesday

It was a Wednesday.

b) Solve for  $y$ :  $7y = 3 \pmod{9}$  (2mrks)

$$7y = 3 \pmod{9}$$

$$7y = 3 + 9 \pmod{9}$$

$$7y = 12 \pmod{9}$$

$$7y = 2 \pmod{9}$$

$$7y = 2 + 9 \pmod{9}$$

$$\underline{\underline{y = 3 \pmod{9}}}$$

30. a) Expand  $444_{\text{five}}$  using powers of base ten. (2mrks)

$  \begin{array}{r}  4 & 4 & 4 \\    &   &   \\  \text{Ones} & \text{fives} & \text{five fives} \\  \hline  (4 \times 5 \times 5) + (4 \times 5) + (4 \times 1) \\  (20 \times 5) + 20 + 4 \\  100 + 20 + 4 \\  \hline  124 \text{ ten}  \end{array}  $ $  \begin{array}{r}  (4 \times 5 \times 5) + (4 \times 5) + (4 \times 1) \\  (20 \times 5) + (20 \times 1)  \end{array}  $	$  \begin{array}{r}  (4 \times 5 \times 5) + (4 \times 5) + (4 \times 1) \\  (20 \times 5) + 20 + 4 \\  100 + 20 + 4 \\  \hline  124 \text{ ten}  \end{array}  $ $  \begin{array}{r}  (1 \times 10^2) + (2 \times 10^1) + (4 \times 10^0) \\  \hline  \end{array}  $
---	---

b) Find the value of base  $x$  in the number  $106_x = 46_{\text{nine}}$  (3mrks)

$  \begin{array}{r}  106_x = 46_{\text{nine}} \\    \quad   \\  \text{Ones} \quad \text{Ones} \\  \hline  x \times x \times 9 \\  \hline  (1 \times x \times x) + (0 \times x) + (6 \times 1) = (4 \times 9) + (6 \times 1) \\  2x + 0 + 6 = 36 + 6 \\  2x + 6 = 42 \\  2x + 6 - 6 = 42 - 6 \\  2x = 36  \end{array}  $	$  \begin{array}{r}  2x = 36 \\  2 \quad ? \\  \hline  x = 18 \\  \hline  \text{X = eighteen}  \end{array}  $
---	---

31. Victoria had 30 goats, she sold  $\frac{1}{6}$  of them to Vanessa and  $\frac{3}{5}$  of the remainder to Vivian.

a) Find how many goats did Vivian buy from Victoria. (2mrks)

$$\frac{1}{6} - \frac{30}{1}$$

$$\frac{1}{6} \times 6 - \frac{30 \times 6}{1}$$

$$1 \times 1 - 30 \times 6$$

$$\frac{180 - 1}{6}$$

$$\begin{array}{r}
 300 \\
 \hline
 6 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 30 \\
 \hline
 \end{array}$$

b) Calculate how many goats Victoria remained with.

(3mrks)

$$\frac{5}{5} - \frac{3}{5} = \frac{2}{5}$$

2 of 30

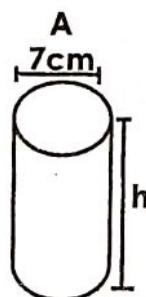
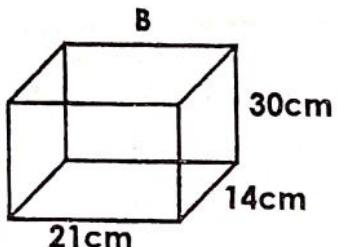
$\frac{2}{5} \times 30$

$\frac{2}{5} \times 30^6$

$\frac{2}{5} \times 6$

12 goats *B*

32. Cylindrical tins of size A are to be packed into box B as shown below.



- a) If 18 tins are to be packed into the box. Find the height of the tin.

(2mrks)

$$\frac{L}{D} = \frac{21}{7}$$

3 tins

$$\frac{W}{D} = \frac{14}{7}$$

= 2 tins

$$\frac{H}{h} = \frac{30}{10}$$

10

$$\frac{3 \times 2 \times h}{6} = 18$$
$$\frac{h}{1} = \frac{18}{6}$$
$$h = 3 \text{ cm}$$

- b) Calculate the space left after packing all the tins into the box.

(Use  $\pi = 22$ ) (3mrks)

$$A = L \times W \times h$$
$$= 21 \text{ cm} \times 14 \text{ cm} \times 30 \text{ cm}$$
$$= 84 \text{ cm} \times 30 \text{ cm}$$
$$= 2520 \text{ cm}^3$$

~~$$2520 \text{ cm}^3 = \pi r^2 h$$
$$2520 \text{ cm}^3 = \frac{22}{7} \times \frac{7}{2} \times 7 \times 3 \text{ cm} \times 9 \text{ cm}$$
$$2520 \text{ cm}^3 = 11 \times 1 \times 7 \times 3 \text{ cm} \times 9 \text{ cm}$$
$$2520 \text{ cm}^3 = 11 \times 7 \times 3 \text{ cm} \times 9 \text{ cm}$$
$$2520 \text{ cm}^3 = 77 \text{ cm} \times 3 \text{ cm} \times 9 \text{ cm}$$
$$2520 \text{ cm}^3 = 2070 \text{ cm}^3$$~~

END

9

~~$$2520 \text{ cm}^3$$
$$2070 \text{ cm}^3$$~~



# HORMISDALLEN SCHOOL - GAYAZA

## PRE- P.L.E EXAMINATION SET 8

### MATHEMATICS

*Time allowed: 2 hours 30 minutes*

NAME: \_\_\_\_\_

INDEX NUMBER: 5 3 7 9 9 5 \_\_\_\_\_

Signature: \_\_\_\_\_

Stream: \_\_\_\_\_

**DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.**

Read the following instructions carefully:

1. This 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. Any work done in pencil other than graphs, pictures and diagrams will **not** be marked.
4. **No calculators** are allowed in the examination room.
5. Unnecessary changes of work may lead to **loss** of marks.
6. Any handwriting that cannot easily be read may lead to **loss of marks**.
7. Do **not** fill anything in the boxes indicated:

A	
B	
<b>TOTAL</b>	

FOR EXAMINER'S USE ONLY		
Qn. No.	MARKS	EXRS' NO.
1 – 5		
6 – 10		
11 – 15		
16 – 20		
21 – 22		
23 – 24		
25 – 26		
27 – 28		
29 – 30		
31 – 32		

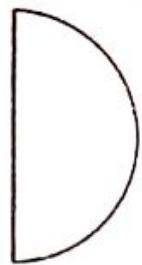
*Turn over*

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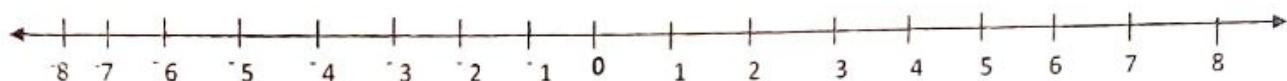
**SECTION A (40marks)**

1. **Workout:**  $389 + 73$
  
2. **Simplify:**  $2m + a - m - 3a.$
  
3. Change **XCVI** to Hindu – Arabic numerals.
  
  
  
  
  
  
4. Find the next number in the sequence below.  
**125, 64, 27, \_\_\_\_\_**
  
  
  
  
  
  
5. After selling a radio at sh. 40,000. Omwedo got a loss of sh. 4500. Calculate the cost price of the radio.
  
  
  
  
  
  
6. An examination which started at 9:15 a.m. lasted for  $2\frac{1}{2}$  hours. At what time did it end?

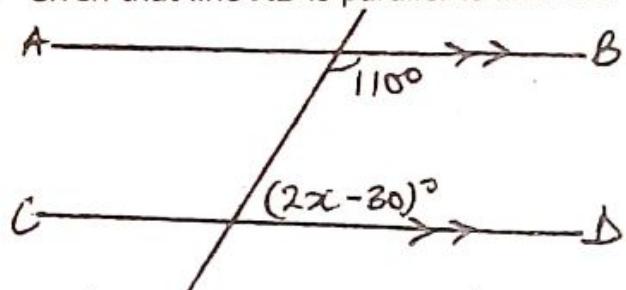
7. How many lines of folding symmetry has the figure below.



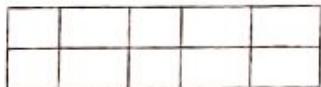
8. Show  $2 \times 3$  on the number line below.



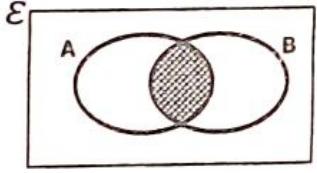
9. Given that line  $AB$  is parallel to line  $CD$ .



10. Shade  $\frac{2}{5}$  of the diagram below.



11. Increase sh. 3000 by 20%.

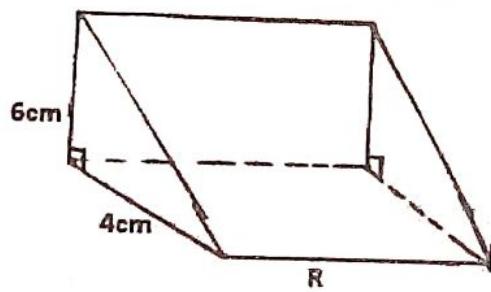
12. Nakato banked sh. 100,000 in Stanbic Bank at a simple interest rate of 12% per annum. Find the interest she earned after a period of 8 months.
13. At an average speed of 60km/hr a car covered a distance of 120km. Calculate the time it took to cover that distance.
14. Describe the unshaded part of the Venn diagram below.
- 
15. Workout:  $123_{\text{five}} + 134_{\text{five}}$
16. If today is Tuesday, Teachers are paid their salary. What day of the week will their next pay be, 30 days from today?

17. Using a ruler and a pair of compasses only, construct an angle of  $165^\circ$  in the space provided below.

18. Workout:  $(232 \div 18) - (16 \div 18)$  using the distributive property only.

19. Otim bought 12kg of sugar which he packed using 200g satchets. How many satchets did he get?

20. The volume of prism below is 240cc. find the length marked R.



## **SECTION B**

21.(a) Express 9067 in expanded form using exponents. (**2marks**)

(b) **Solve:**  $34_t = 42_{\text{five}}$ . **(3marks)**

22. The table below shows marks scored in the beginning of term III exams.  
Study it and answer the questions that follow.

Marks scored	60	80	70	90
Number of pupils	1	2	1	3

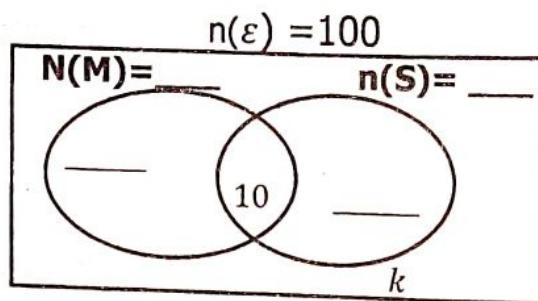
(a) How many pupils did the exams? **(2marks)**

(b) Workout the range of the marks scored. **(1mark)**

(c) Find the median score. **(2marks)**

23. A school has 100 pupils.  $\frac{1}{2}$  of the pupils got face masks (**M**)  $\frac{1}{4}$  of the pupils got shields (**S**) and 10 pupils got both.

(a) Represent the above information on the Venn diagram below.



(b) Find the value of  $k$ .

*(2 marks)*

24. The table below shows the exchange rates of different currencies. Use it to answer the questions that follow.

Currency	Buying rates	Selling rates
1US dollar	Ugsh.3700	Ugsh.3850
1K sh.	Ugsh. 30	Ugsh.32
1RF	Ugsh.3.5	Ugsh.3.7

(a) A business man has **U\$ 1000**, how much in Uganda shillings does he have?  
*(3marks)*

(b) Convert Ugsh. 320,000 to Kenya shillings. *(2marks)*

25. (a) Simplify:  $\frac{0.24+0.32}{0.7 - 0.3}$

(3marks)

(b) In a class there are 20% more boys than girls. If there are 200 pupils in a class.  
How many girls are there in the class? (2marks)

26. Ronald, Betty and Ketrah shared money in the ratio of  $3 : x : 2$  respectively.  
If Ronald got sh. 1,000 more than Ketrah and their total amount shared was  
sh. 10,000.

(a) Find the value of  $x$  (3marks)

(b) How much money did Betty get? (2marks)

27. Daphine has  $(3d - 4)$  books. Saad has  $(d+1)$  fewer books than Daphine. Jane has  $(d+10)$  more books than Saad. The total number of books for the pupils is  
28. Find the number of books Jane has. **(5marks)**

28. Square tiles of 30cm each are to be fixed on a floor measuring 9m by 6m.

(a) How many tiles will be fixed on the floor? **(3marks)**

(b) If a box contains 50 tiles costs sh. 250,000. How much will be spent on tiles? **(2marks)**

29. The exterior angle of a regular polygon is  $100^\circ$  less than its interior angle.  
(a) What is the size of the exterior angle? **(3marks)**

(b) Name the polygon. **(2marks)**

30. Shiffa was left with sh. 420, 000 after spending 30% of her salary.

(a) How much is her salary? **(3marks)**

(b) Find how much money she spent. **(2marks)**

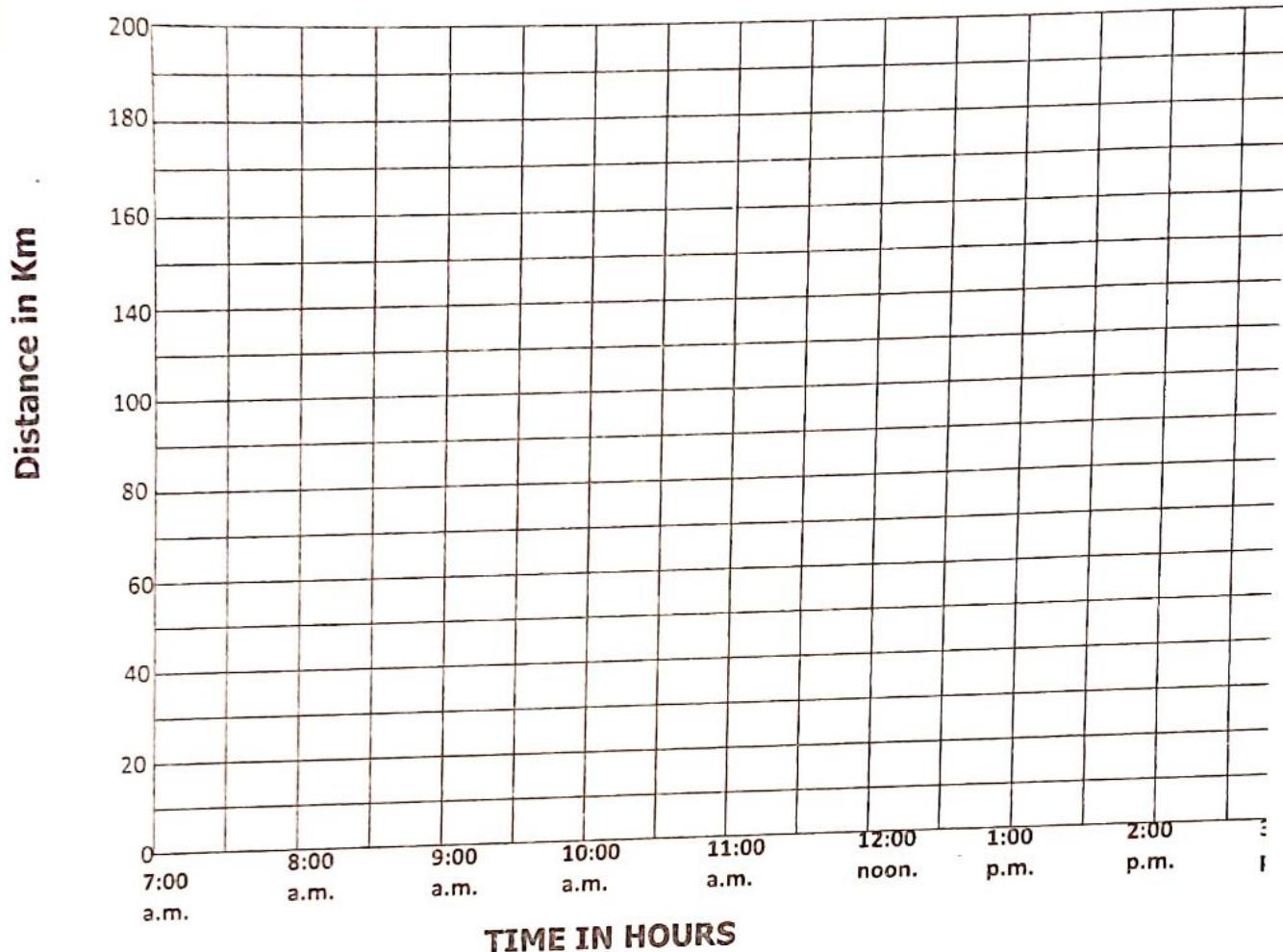
31. (a) Using a pair of compasses, a ruler and a pencil only, construct an equilateral triangle **MTN** of side 4cm.

(b) Drop a perpendicular line from **T** to meet line **MN** at point **D**.

(c) Measure the line **TD**. **(1mark)**

32. A motorist left town **A** at 7:00 a.m. and drove at a speed of 60km/hr for  $1\frac{1}{2}$  hours. After resting for one hour at town **B**, he continued to town **C** at an average speed of 30km/hr for 2 hours.

(a) Show the motorist's journey on the graph provided below.



(b) Calculate the average speed for the whole journey. (2marks)

**END**