The HIGHWAY EXAMINATIONS

P.7 PLACEMENT SET 1-2025

MATHEMATICS

Time Allowed: 2 hours 30 minutes.

Random No.						Personal No.		

Candidate's Name: .....

Candidate's signature: .....

<u>Read the following instructions carefully</u>:

1. The paper has **two** sections **A** and **B.**
2. Answer **all** questions**. All** answers to both Sections **A** and **B must** be written in the Spaces provided.
3. **All** answers must be written using a **blue or black ball-point pen or ink.**
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.

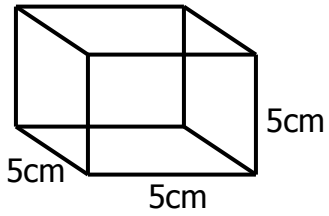
FOR EXAMINERS' USE ONLY		
QN.NO.	**MARKS**	**EXR'S NO.**
1 – 10		
11 – 20		
21 – 30		
31 – 40		
41 – 43		
44 – 46		
47 – 49		
50 – 52		
53 – 55		
Total		

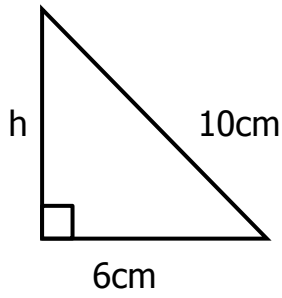
Prepared by the highway examinations. **P.T.O**

LOCATED *NANSANA MUNICIPALITY* KAMPALA WILSEM BUILDING ROOM 23

TEL: 0740888097

SECTION A (40 marks)

1	**Work out**: 2 0 + 1 1 _____	2	Write " **two thousand twenty-two**" in figures.
3	Express $\frac{4}{5}$ as a percentage**.**	4	Find the total length of all the edges of the cube below. 
5	**Simplify**: 7y + 5p – 4y − 3p.	6	Express 36km/h to metres per second.
7	Tom had $\frac{5}{6}$ of a sugarcane, he gave away $\frac{2}{3}$ to his friend, Patel. What fraction did he remain with?	8	Find the value of $\boldsymbol{x}$; $3^x \times 3^2 = 3^3$
9	Express 0.75 as a common fraction in its simplest term.	10	Find the circumference of a circle whose diameter is 14cm. $\left(use\ \pi\frac{22}{7}\right)$

11.	The third of the 3 consecutive odd numbers is x. Write the expression for the first odd number.	12.	Work out: 3tens x 4.
13.	Find the average of 5, 4 and 9.	14.	Use the right angled triangle below to find the value of **h.** 
15	Arinda was given one thousand shilling banknotes numbered CM00958 to CM00967, how many banknotes was she given?	16	Express **CIX** as a Hindu Arabic numeral.
17.	Set R has **3** elements. How many subsets has set R?	18.	Nakabuye tossed a dice once. What is the probability of getting a factor of **4** appearing on top?

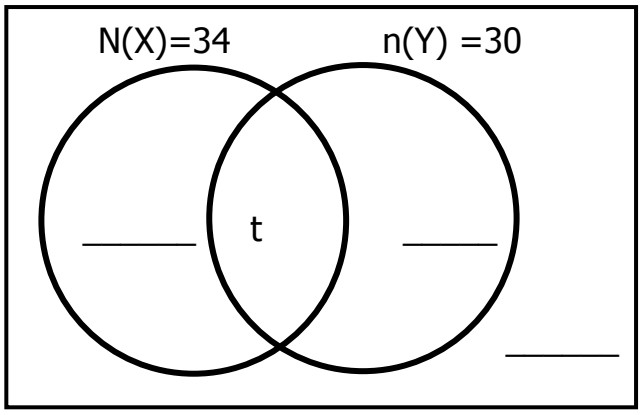
19.	If a = $\frac{1}{2}$ b = $\frac{1}{6}$, what is the value of $\frac{a}{b}$?	20.	**Work out**: $2\ 2\ 3_{five}$ + $1\ 2\ 3_{five}$ ——— ———

SECTION B (60 marks)

(Marks for each question are indicated in brackets)

21. If n(X) = 34, n(Y) = 30 and n(X∩Y) = **t** while $n(X \cup Y)^1 = 4$.

a) Use the above data to complete the Venn-diagram below. ***(3marks)***



b) If there are 50 elements in the universal set, find the value of **t**. ***(2marks)***

22. During a study trip, the school hired 10 coasters and 5 buses. Each coaster

carried 35 pupils while each bus carried 62 pupils.

a) How many pupils went for the study trip? ***(3marks)***

b) If all P.1 – P.4 pupils used coasters and paid 10,000 each, while P.5–P.7 pupils used the buses and paid sh. 20,000 each, how much money did the school collect? ***(3marks)***

23. **A man** shared sh.140, 000 amongst his 3 sons Edward, Edgar and Elvis in the ratio of 7:3:4 respectively.

a) How much money did each get? (***4marks)***

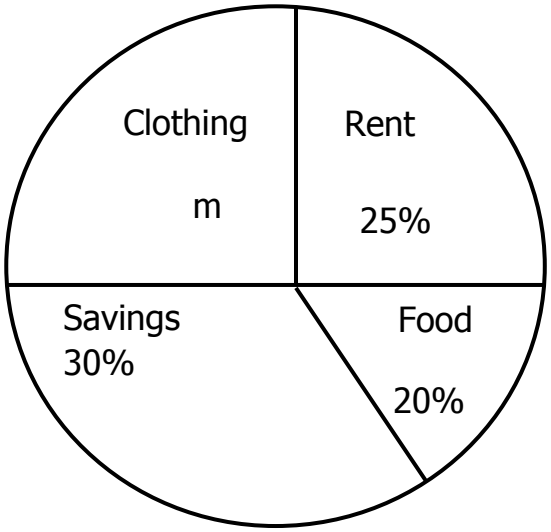
b) How much more money did Edward get than Elvis? ***(1mark)***

24. Using a pair of compasses, a ruler and a pencil only;

a) Construct triangle TEA such that angle ATE = 90^0, line TE = 6cm and line AT = 7cm. ***(4marks)***

b) Measure the size of angle TEA. ***(1mark)***

25. The percentages in the circle graph below shows how **Mutebi** spends his monthly salary. Study and use the graph to answer the questions that follow.



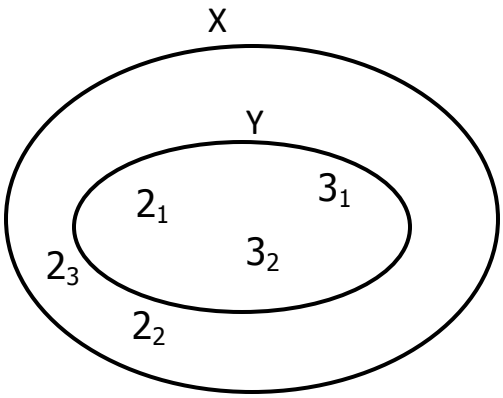
a) Find the percentage represented by **m.** ***(2marks)***

b) If Mutebi spends sh.**50,000** on rent, how much money does he save?
(3marks)

26. a) Find the number that has been expended to give;
$(4 \times 10^{1}) + (5 \times 10^{0}) + (2 \times 10^{-1}) + (5 \times 10^{-2})$.
(3marks)

b) Subtract **15.25** from the number in (a) above. ***(2marks)***

27. Two numbers **x** and **y** were prime factorised and represented on the Venn-diagram. Use it to answer the questions that follow.



a) Find the value of **X**. ***(2marks)***

b) Find the **GCF** of **y** and **X**. ***(2marks)***

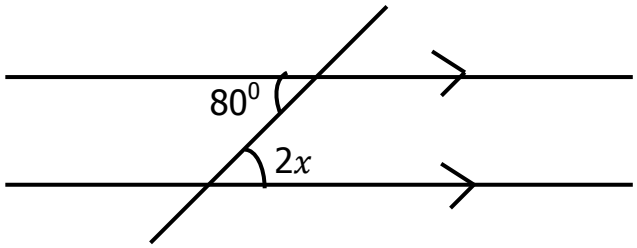
28. **The shopping bill below shows Mr. Bwengye's bill over the weekend**.

Items	**Quantity**	**Unit Cost**	**Amount**
Sugar	3kg	Sh. _____	Sh.9,000
Meat	$1\frac{1}{2}$ kg	Sh. 10,000	Sh. _____
Bread	2 loaves	Sh. _____	Sh.10,000
Soap	_____ bars	Sh. 3500	Sh.7000
Total Bill			Sh._____

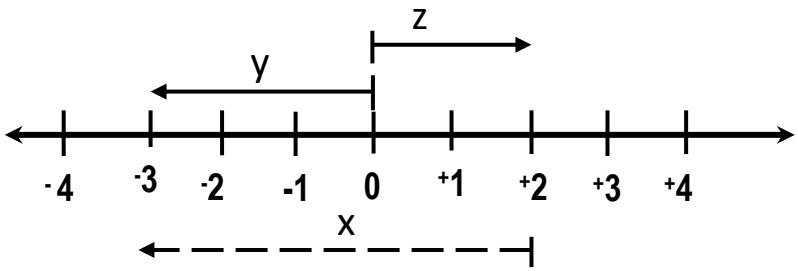
Complete the bill table above. ***(5marks)***

29. a) **k** and **100⁰** are supplementary angles. Find the value of **k**. ***(2marks)***

b) Find the value of x in degrees. (***2marks)***



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

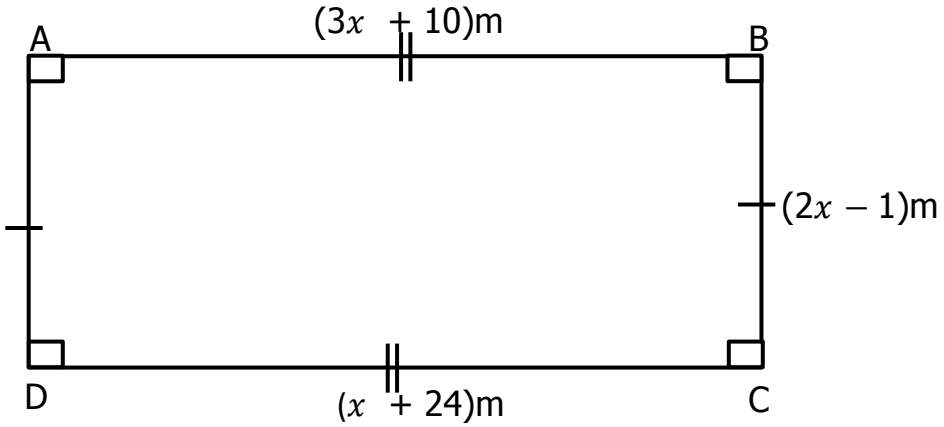


a) Write the integer represented by; ***(3marks)***

i) x | ii) y | iii) z

b) Write the Mathematical statement represented on the above number line.
(2marks)

31. **ABCD** is a rectangular garden; use it to answer the questions that follows.



a) Find the value of $\boldsymbol{x}$ ***(3marks)***

b) **Work out** the total distance round the rectangular garden above. (***3marks)***

32. Mercedes Benz takes 4 hours to travel from Kampala to Lyantonde at a steady speed of 60km/hr and takes 6 hours on its return journey.

a) How far is Lyantonde from Kampala? ***(2marks)***

b) Calculate the average speed for the whole journey. **(*3marks)***

END

Prepared by the highway examinations.

LOCATED *NANSANA MUNICIPALITY* KAMPALA WILSEM BUILDING ROOM 23

TEL: 0740888097