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: ....

Read the following instructions carefully:

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.

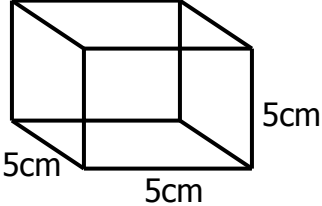| FOR EXAMINERS' USE ONLY		
QN.NO.	MARKS	EXR'S NO.
1 – 10		
11 – 20		
21 – 30		
31 – 40		
41 – 43		
44 – 46		
47 – 49		
50 – 52		
53 – 55		
Total		

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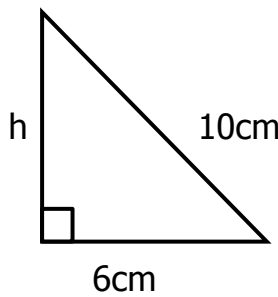
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SECTION A (40 marks)

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. 5cm 5cm 5cm
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 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.** h 10cm 6cm
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?

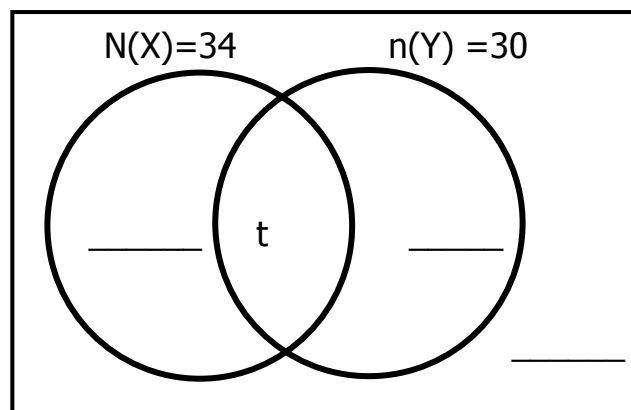|	
19. If $a = \dfrac{1}{2}$ $b = \dfrac{1}{6}$, what is the value of $\dfrac{a}{b}$?	20. **Work out**: $\begin{array}{r} 2\ 2\ 3_{\text{five}} \\ +\ 1\ 2\ 3_{\text{five}} \\ \hline \end{array}$

SECTION B (60 marks)
(Marks for each question are indicated in brackets)

21.　　　If $n(X) = 34$, $n(Y) = 30$ and $n(X\cap Y) = $ **t** while $n(X\cup Y)^{1} = 4$.
   a)　Use the above data to complete the Venn-diagram below.　　　*(3marks)*

N(X)=34　　　　　　　n(Y) =30

t

   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

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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
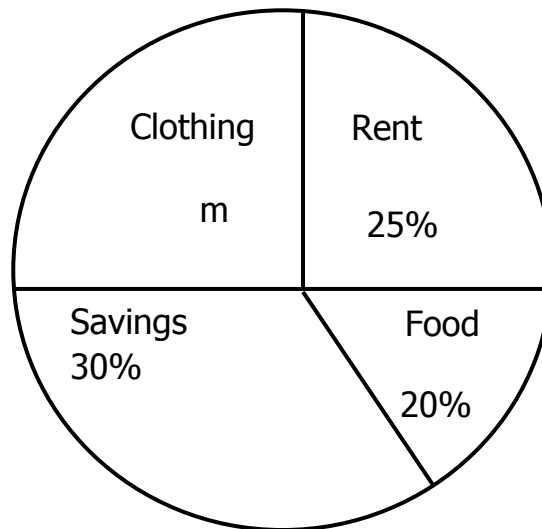AT = 7cm. *(4marks)*

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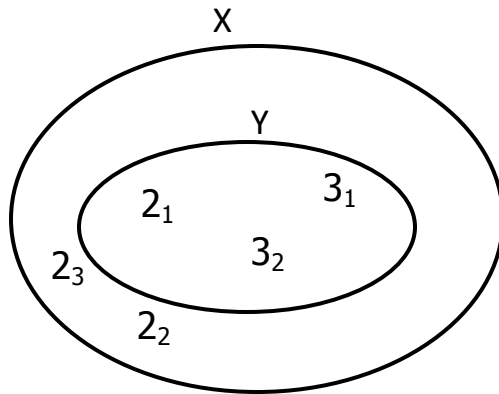
b) If Mutebi spends sh.**50,000** on rent, how much money does he save?   (3marks)

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.

X

Y

2_1 3_1

3_2

2_3

2_2

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*)

80^0 $2x$
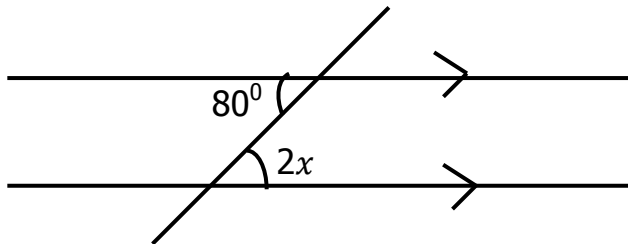
30. Use the number line below to answer the questions that follow.

z

y

-4   -3   -2   -1   0   +1   +2   +3   +4

x
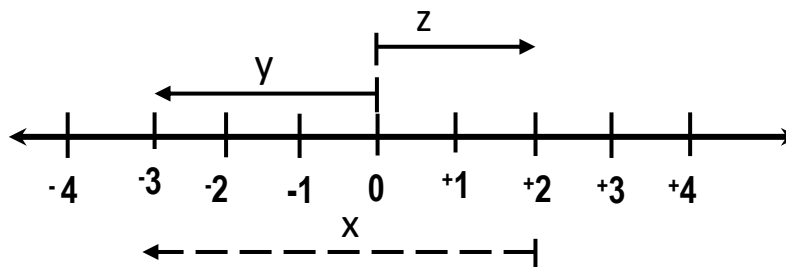
a) Write the integer represented by;   (*3marks*)
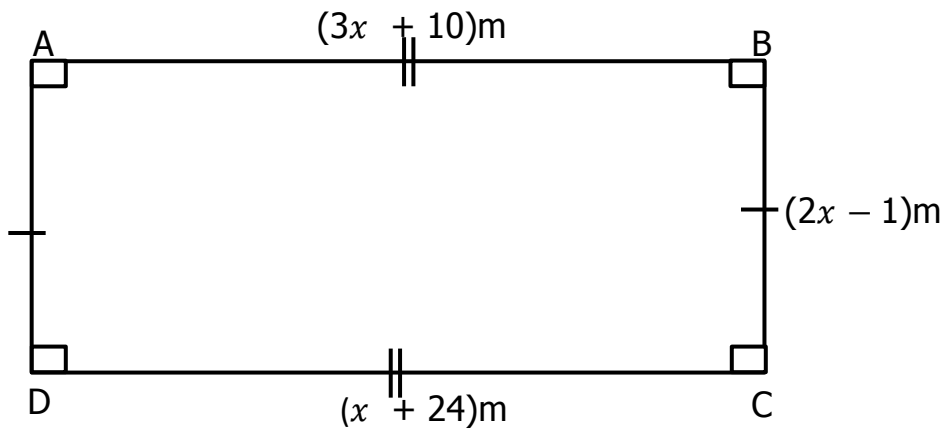
i)   x   ii) y   iii)   z

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 ―――――― $(3x + 10)$m ―――――― B

$(2x - 1)$m

D ―――――― $(x + 24)$m ―――――― C

a) Find the value of 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

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