



FIRST TERM LESSON NOTES

FOR
MATHEMATICS

TOPICAL BREAKDOWN

THEME 1: OUR SUB COUNTY / DIVISION

SET CONCEPT

- Definition of a set
- Matching sets
- Naming sets
- Listing sets
- Comparing sets
- Types of sets
- a) Equal sets and not equal sets
- b) Equivalent and non equivalent sets
- c) Union sets
- d) Intersection
- e) Empty set
- Different types of sets being represented on a Venn diagram.

THEME 2: LIVELIHOOD IN OUR SUB-COUNTY / DIVISION.

NUMERATION SYSTEM AND PLACE VALUE

- Numbers and their symbols
- Forming numbers using basic digits
- Arrange the given numbers in increase and decrease order.
- Grouping in ones, tens and hundreds.
- Representing numbers on the abacus and writing numbers from the abacus.
- Finding numbers represented on the abacus.
- Writing numbers in words and figures.
- Place values of numbers.
- Expanded form of natural numbers.
- Values of numbers (digits)
- Adding numbers using the abacus.
- Subtracting numbers using the abacus.
- Roman numerals up to 50.
- Changing Hindu Arabic Numerals to Roman Numerals and Vice versa.
- Application on Roman Numerals.

THEME 3: OUR ENVIRONMENT IN OUR SUB-COUNTY OPERATION ON NUMBERS

- Comparing digits
- Using greater than $>$, less than $<$ or equal to $=$
- Addition of numbers
- Subtraction of numbers
- Multiplication of numbers
- Division of numbers

THEME 4: OUR ENVIRONMENT AND WEATHER IN OUR SUB-COUNTY NUMBER FACTS

AND SEQUENCES

- Even numbers
- Odd numbers
- Prime numbers
- Counting numbers

- Whole numbers
- Multiples of natural numbers
- Factors of numbers
- Finding L.C.M
- Magic square

GEOMETRY

Simple plan shapes with their properties

- Square
- Rectangle
- Triangle
- Circle
- Trapezium

THEME: OUR SUB-COUNTY / DIVISION

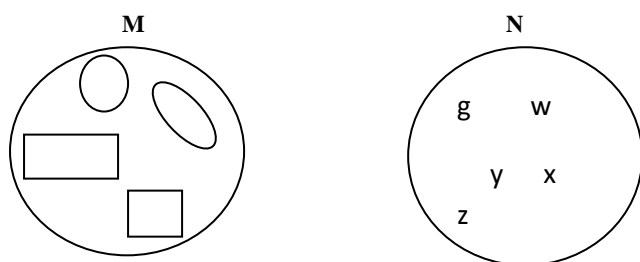
SET CONCEPT

Definition of a set

A set is a collection of well defined members or elements.

Comparing and matching sets

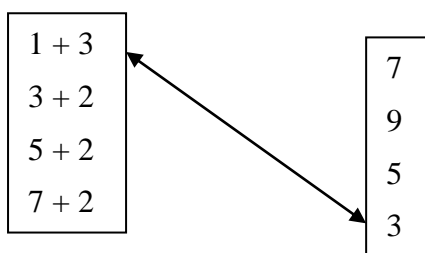
Comparing sets



Set M has 4 members.

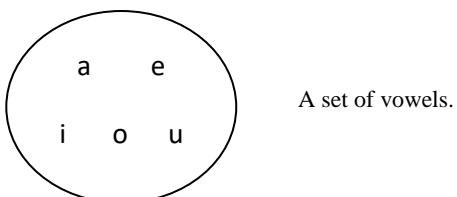
Set N has 5 members.

Set N has more members than M.

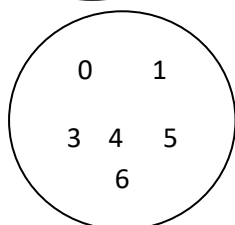


Forming and naming sets

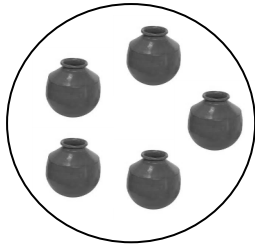
Names of sets are based on members or elements e.g



A set of vowels.



A set of numbers.



A set of pots.

Writing down sets.

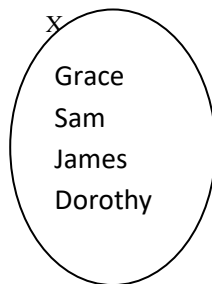
Capital letters are used to name different sets.

E.g A, B, C, or D etc.

Members of sets are written in curl brackets and are separated by commas.

$A = \{1, 2, 3, 4\}$

Example



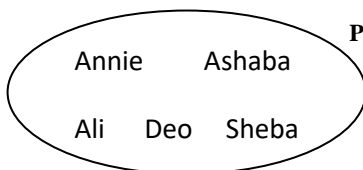
$X = \{\text{Grace, Sam, James, Dorothy}\}$

Ref: 1. Understanding MTC Bk 3 page 1

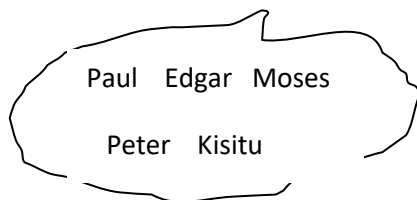
2. Mk Primary Mathematics Pupils bk 3.

3. Pri School MTC

Drawing and listing sets.



$P = \{\text{Annie, Ali, Deo, Ashaba, Sheba}\}$



$S = \{\text{Paul, Peter, Kisitu, Edgar, Moses}\}$

Finding number of members in a given set.

How many members are in set P above?

There are 5 members in set P.

$n(P) = 5$ members.

Ref: 1.Primary School Mathematics 2.Mk Book 2 3.Understanding mathematics.

TYPES OF SETS AND THEIR SYMBOLS

EQUAL SETS (\equiv)

These are sets that have same numbers and same members.

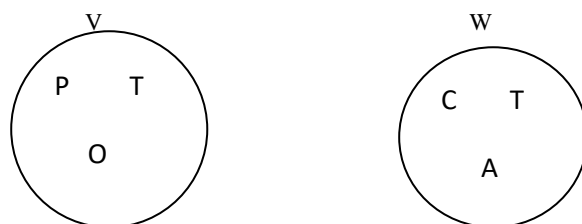
Examples;

1. $Y = \{a, b, c\}$
 $N = \{c, b, a\}$
Set Y is equal to set N.
Set Y = set N

Not equal sets (\neq)

Sets are not equal when they have different number of numbers and members.

Example:

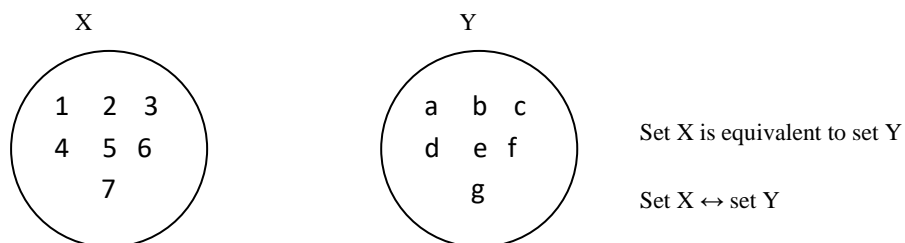


- Ref:**
1. Understanding mathematics Bk 3 pages 3, 4 – 5.
 2. Primary Mathematics Bk 3 page 1.
 3. MK Mathematics Bk 3 page 5.

Equivalent sets (\leftrightarrow)

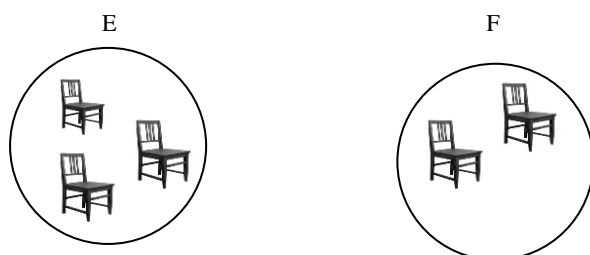
Equivalent sets are sets that have the same number of members but different members.

Example



Non-equivalent sets (\nleftrightarrow)

They don't have the same number of members.



- Ref:**
1. Understanding Maths Bk 3 page 2.
 2. Primary School maths Bk 3 page 1.

Union sets (\cup)

Writing the members together without repeating any member or uniting different members of sets without repeating any member.

Examples

a) $A = \{1, 2, 3\}$ $B = \{4, 5, 6\}$

$$A \text{ union } B = \{1, 2, 3, 4, 5, 6\}$$

$$A \cup B = \{1, 2, 3, 4, 5, 6\}$$

$$n(A \cup B) = \text{members.}$$

b) $X = \{1, 2, 3\}$ $Y = \{3, 4, 5\}$

$$X \text{ union } Y = \{1, 2, 3, 4, 5\}$$

$$X \cup Y = \{1, 2, 3, 4, 5\}$$

$$n(X \cup Y) = \text{members.}$$

Ref: 1. MK Mathematics Bk 3

2. Primary Schools Maths Bk 3 page 4.

Intersection set (\cap)

Common members found in given sets.

Examples

$C = \{a, c, f\}$ $D = \{m, a, f\}$

$$\text{Set C intersection Set D} = \{a, f\}$$

$M = \{1, 2, 3\}$ $N = \{2, 4, 5, 3\}$

$$\text{Set M intersection Set N} = \{2, 3\}$$

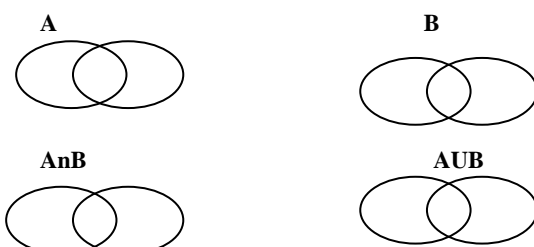
$$\text{Set M} \cap \text{Set N} = \{2, 3\}$$

$$n(M \cap N) = 2 \text{ members}$$

Ref: Primary Maths Bk 3 page 4.

Shading different regions of sets in Venn diagrams.

Shade the following sets.



Empty sets \emptyset , $\{ \}$

An empty set is a set that has no members. It is also called a NULL set.

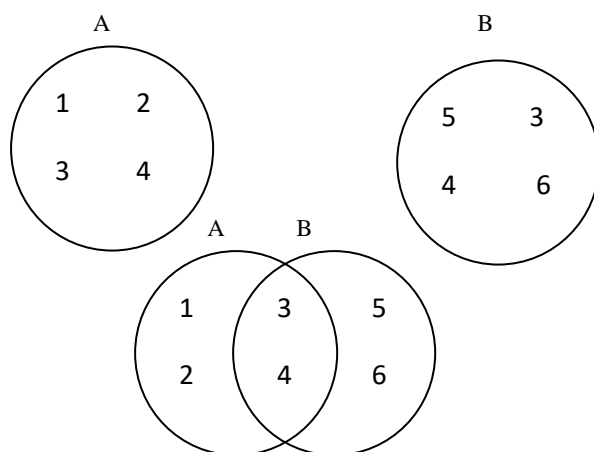
Examples

- a) A set of books made of stones.
- b) A set of houses made of hair.
- c) A set of bags with water covers.

The symbol $\{ \}$ or \emptyset means empty set or null set.

- Ref:**
- 1. MK Primary Mathematics pupil's book 3 page 12.
 - 2. Understanding mathematic bk 4 page 6 – 7.

Representing different types of sets on A Venn Diagram



Set A Union B = $\{1, 2, 3, 4, 5, 6\}$

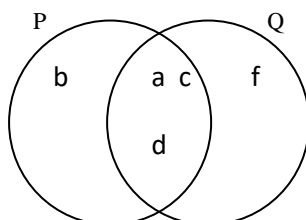
Set A \cup B = $\{1, 2, 3, 4, 5, 6\}$

Set A intersection B = $\{3, 4\}$

Set A \cap set B =

P = $\{a, b, c, d\}$

Q = $\{a, c, d, f\}$



P \cup Q = $\{a, b, c, d, f\}$

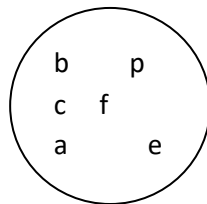
$$P \cap Q = \{a, c, d\}$$

$n(P) =$ members. $n(Q) =$ members.

- Ref:** 1. **Primary mathematics pupil's book 3 page 4.**
2. **Understanding mathematics bk 4 page 6 – 9.**

TOPICAL TESTS

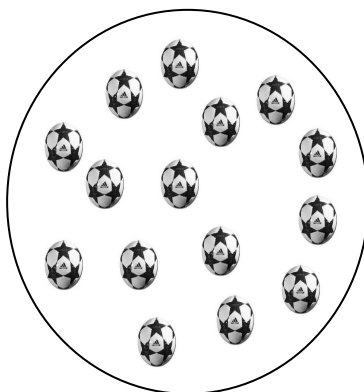
1. What is a set?
2. How many members are in the sets below?



3. Draw a set of three oranges.
4. Name the set given below;

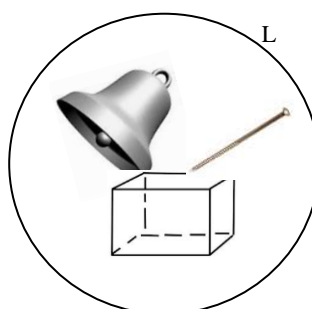
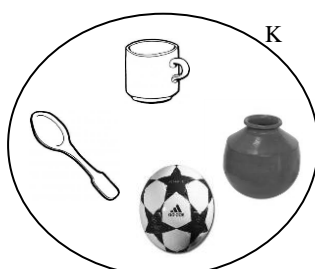
 $K = \{\text{Anna, Liz, Anita, Lucy}\}$
5. If $B = \{\}$. How many members are in set B?

6. Given that set below is Q

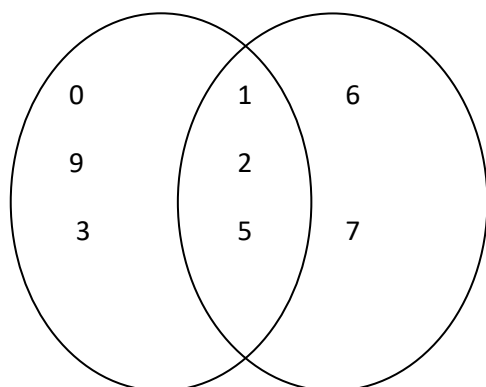


How many groups of threes are in set Q above?

7. Study the sets below and answer questions that follow.



- a) Which set has more members?
 - b) Which set has less members?
 - c) How many members are in Set K?
 - d) How many members are in set L?
8. Study the venn diagram and answer questions that follow.



Find:

- a. $Z \cap Y =$
- b. $Z \cup Y =$
- c. $n(Z) =$
- d. $n(Y) =$

THEME TWO

LIVELIHOOD IN OUR SUB-COUNTY / DIVISION

NUMERATION SYSTEM AND PLACE VALUES

Numbers and their symbols

All numbers have names of their symbols to represent them.

<u>Name</u>	<u>Symbol</u>
One	1
Two	2
Three	3
Four	4
Five	5
Six	6
Seven	7
Eight	8
Nine	9
Ten	10
Eleven	11
Thirteen	13
Fourteen	14
Fifteen	15
Sixteen	16
Seventeen	17
Eighteen	18
Nineteen	19
Twenty	20
Thirty	30
Forty	40
Fifty	50
Sixty	60

Seventy	70
Eighty	80
Ninety	90
One hundred	100

Forming numbers using basic digits

The basic digits are 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 using digits to form numbers.

Use, 1, 2 \longrightarrow 12, 21

3, 6 \longrightarrow 36, 63

1, 2, 7 \longrightarrow 127, 217, 271, 721, 712

Forming the biggest (largest) and smallest number using the following digits

a) 1, 3, 2

b) 2, 4, 7

c) 1, 6

d) 9, 2

Arrange the given digits in ascending and descending order.

a) 20, 13, 31, 0

b) 12, 32, 20, 46

Ex

Primary school MTC pg 8 – 10

Primary mathematics for Uganda pg 10

Arranging numbers in ascending and descending order

7, 4, 10, 9, 3, 20, 15, 6

14, 21, 28, 7, 42, 35

What number comes before and after?

Before

After

$24 = 24 - 1 = 23$

$24 = 24 + 1 = 25$

Exercise

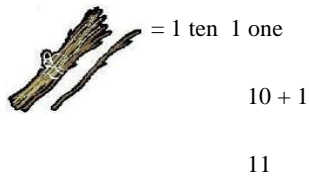
Primary Mathematics pg 7.

Primary school mathematics pg 10.

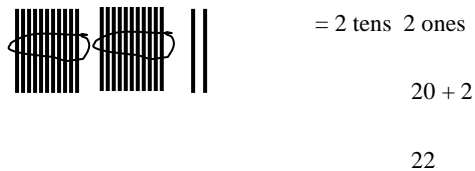
Grouping in hundreds, tens and ones

e.g

- Eleven



- Twenty two

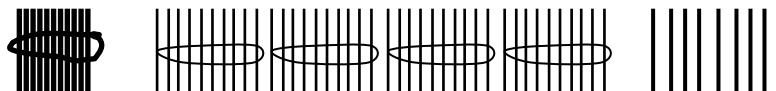


- 32, 4, 56, 5, 47, 692, 798

- one hundred forty nine

=1 hundred 4 tens 9ones

$$100 + 40 + 9 = 149$$



Exercise

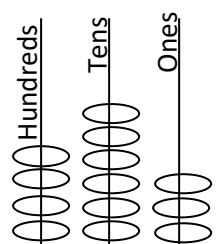
Primary school mathematics Bk 3 pages 6 – 7, 12, 19, 30, 31.

Primary mathematics for Uganda pages 11 – 12

Representing numbers on the abacus and writing numbers from the abacus

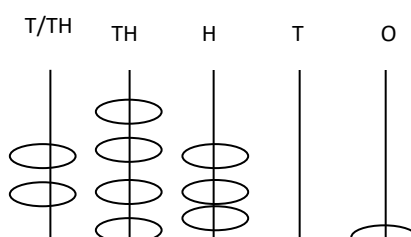
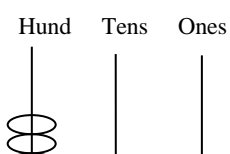
An abacus emphasizes places of digits making up the number.

Ten Thousands	Thousands	Hundreds	Tens	ones



463 = 4 hundred 6 tens 3 ones

Finding numbers represented on the abacus.



$$= 502$$

- a) 68
- b) 444
- c) 2541
- d) 23064

Exercise

Primary Mathematics for Uganda Pgs 12, 16.

Primary schools MTC pg 11.

Writing numbers in words / figures

Example

$$\begin{array}{rcl} 48 & = & 40 \text{ forty} \\ & & + 8 \text{ Eight} \\ & & \underline{48 \text{ forty eight}} \end{array}$$

$$\begin{array}{rcl} 298 & = & 200 \text{ Two hundred} \\ & & 90 \text{ Ninety} \\ & & + 8 \text{ Eight} \\ & & \underline{298 \text{ Two hundred ninety eight}} \end{array}$$

Exercise

Primary Sch. Mtc bk 3 pg 31.

Primary Mtc for Uganda pg 12.

Writing number symbols in figures

Examples

One hundred thirty six.

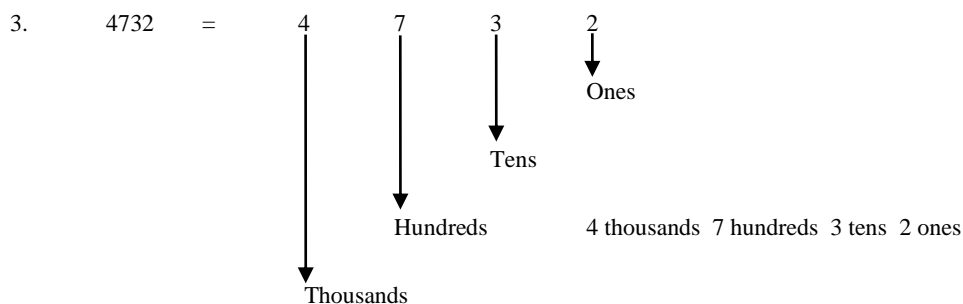
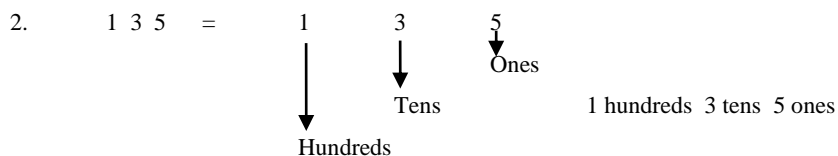
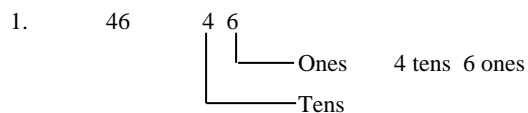
$$\begin{array}{rcl} \text{One hundred} & & 100 \\ \text{Thirty} & & 30 \\ \text{Six} & & + 6 \\ & & \underline{136} \end{array}$$

Two thousand three hundred fourteen.

$$\begin{array}{rcl} \text{Two thousand.....} & & 2\,000 \\ \text{Three hundred.....} & & 300 \\ \text{Fourteen} & & + 14 \end{array}$$

Exercise**Primary school mathematics pg 28.****Primary MTC for Uganda pg 15.****MK Bk 3 pg 24.****Place values of numbers**

This is the position of a digit in a given number. e.g



Expanded form of numbers.

Expand. $640 = 600 + 40 + 0$ $7253 = 7000 + 200 + 50 + 3$

Finding the expanded numbers.

b) $400 + 30 + 6$

	H	T	O
	4	0	0
		3	0
+			6
<hr/>			

a) $7000 + 50 + 9$

	Th	H	T	O
	7	0	0	0
			5	0
+				9
<hr/>				

Values of numbers (digits)

Values of digits represent the size of the numeral in a position it holds.

4 5 6 7

Value of digit 4 = (4 x 1000) It's place value

4000

Value of digit 5 = (5 x 100) It's place value

500

Value of digit 6 = (6 x 10) It's place value

60

Value of digit 7 = (7 x 1) It's place value

7

Finding expanded numbers using place values.

E.g. 1. (4 x 100) + (3 x 10) + (2 x 1)

$$400 + 30 + 2 =$$

H	T	O
4	0	0
	3	0
+		2

E.g. 2. (5 x 1000) + (9 x 10) + (7 x 1)

$$5000 + 90 + 7 =$$

TH	H	T	O
5	0	0	0
		9	0
		+	7

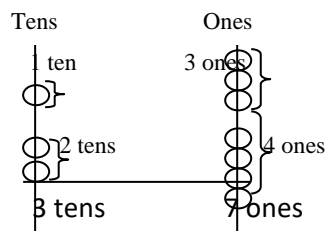
Ref:

Primary school MTC pg 19.

Adding numbers using an abacus

e.g. 24 + 13
 (20 + 10) + (4 + 3)
 30 + 7
 3 tens + 7 ones

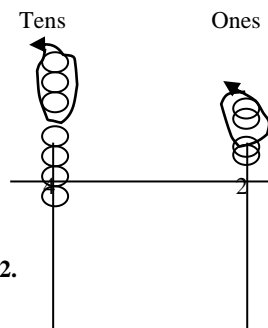
T	O
2	4
	+
	1
	3
3	7



Subtracting numbers using the abacus

74 - 32 (7 tens - 3 tens) - (4 ones - 2 ones)

T	O
7	4
-	3
	2
4	2



Ref:

1. Primary school MTC pg 12.

2. Primary MTC pg 12

Roman Numerals up to L

Long ago people kept records in form of pictures, which were difficult to draw. Therefore they discovered the way of using symbols to represent the pictures. The first people to use symbols were the Greeks, Romans and Egyptians.

Roman Numerals

They work on the principle of expanded numbers.

$$\begin{aligned} 23 &= (20 + 3) \\ &= XX + III \\ &= XXIII \end{aligned}$$

The basic Roman symbols for numbers

<u>Hindu Arabic</u>	<u>Roman Numerals</u>
1	I
2	II
3	III
4	IV
5	V
6	VI
7	VII
8	VIII
9	IX
10	X

Changing Hindu Arabic Numerals to Romans

1. Change 12 to Roman Numerals

$$\begin{aligned} 12 &= (10 + 2) \\ &= X + II \\ &= XII \end{aligned}$$

Change 45

$$\begin{aligned} &40 + 5 \\ &XL + V \\ &XLV \end{aligned}$$

Changing Roman Numerals to Hindu Arabic

$$\begin{aligned} XIX &= X + IX & XLIII &= XL + III \\ &10 + 9 & &40 + 3 \\ &19 & &43 \end{aligned}$$

Application on Roman Numerals

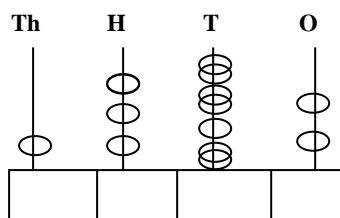
Word sums in Roman Numbers (Numerals)

Ref:

- Primary MTC for Uganda Bk 4.
- Mk Primary Mathematics Bk 4.
- Primary school Mathematics BK 3.
- Primary Mathematics for Uganda Bk 3.

TOPICAL QUESTIONS

- Fill in the missing numbers.
143, 144, _____, _____, 148.
- Draw an abacus for the figure below.
7216.
- What number has been shown on the abacus?



4. Write in figures.
Two thousand four hundred twenty nine.
5. What is the place value of 6 in the number below?
1607
6. What number comes after 1568?
7. Complete the following numbers.
- a) $3254 = \underline{\hspace{1cm}}$ thousands $\underline{\hspace{1cm}}$ hundreds $\underline{\hspace{1cm}}$ tens $\underline{\hspace{1cm}}$ ones.
- b) $7009 = \underline{\hspace{1cm}}$ thousands $\underline{\hspace{1cm}}$ hundreds $\underline{\hspace{1cm}}$ tens $\underline{\hspace{1cm}}$ ones.
8. A trader earned sh. 9050 on Monday. Write the amount of money he earned in words.

THEME THREE

OUR ENVIRONMENT IN OUR SUB-COUNTY

OPERATION OF NUMBERS

Comparing digits using $>$, $<$ or $=$

Using greater than, less than or equal to

$>$ $<$ or $=$

Which is greater?

- a) $6 \underline{\hspace{1cm}} 3$
- b) $2 \underline{\hspace{1cm}} 7$
- c) $4 \underline{\hspace{1cm}} 0$
- d) $17 \underline{\hspace{1cm}} 6$

Which is less?

- a) $98 \underline{\hspace{1cm}} 89$
- b) $412 \underline{\hspace{1cm}} 241$
- c) $934 \underline{\hspace{1cm}} 943$
- d) $521 \underline{\hspace{1cm}} 512$

Addition of numbers

Numbers should be arranged correctly according to their place value. When adding we start from ones. If there is any carrying, then we carry 1 ten to tens.

We continue in that order until all numbers are added correctly.

Three by three

	H	T	O
	1	4	7
+	4	0	2
	<u>5</u>	<u>4</u>	<u>9</u>

four by four

	Th	H	T	O
	3	7	4	2
+	2	1	3	5
	<u>5</u>	<u>8</u>	<u>7</u>	<u>7</u>

Therefore, the same will be done towards word sums.

Ref:

1. **Primary Mathematics Bk 3 pg 11.**
2. **Primary MTC for Uganda pg 25, 26**
3. **Primary School Mathematics pg 14.**
4. **Understanding MTC pg 12.**

Subtraction of members with regrouping and without regrouping

Numbers should be arranged correctly according to their place value. When subtracting we begin with or start handling with one. If there is borrowing (re-grouping). It is done in groups of tens.

That order is done until all numbers are completed.

Example

$$\begin{array}{r} 4 \quad 4 \\ - 1 \quad 3 \\ \hline 3 \quad 1 \end{array}$$

	T	O		T	O
	4	3	→	3	13
-	1	9		-	1
					9
					2
					4

	H	T	O		H	T	O
	2	10	10	→	1	9	10
-		3	6		-		3
							6
						1	6
							4

Word sums involving subtractions

The same will be done in handling word sums

Ref:

1. Primary Mathematics for Uganda.
2. Primary Mathematics Bk 3 pg 33.
3. Primary school mathematics pgs 19, 34-35.
4. Understanding mathematics pg 21 – 24, 44.

Multiplication of numbers on a numberline.

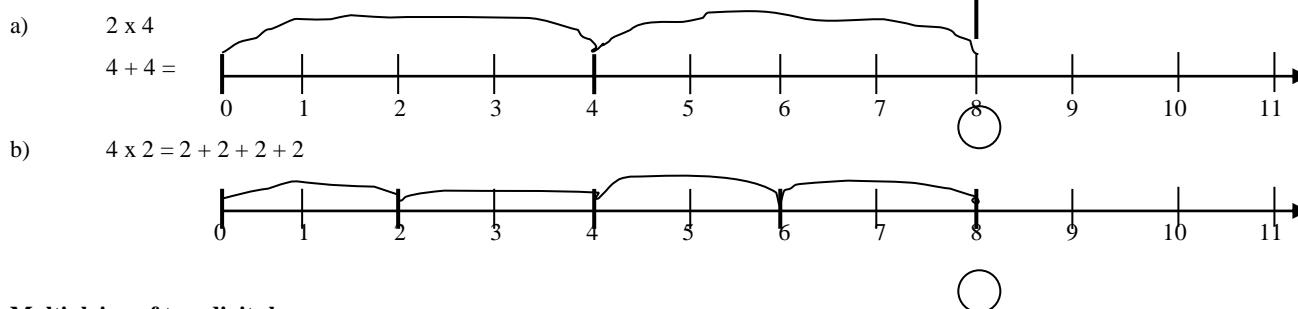
Multiplying by 2, 4, 3, 5, 6 up to 12.

Drawing multiplication tables

$$2 \times 3 = \text{O O O}$$

$$2 \times 4 = \text{O O O O}$$

Workout numbers using the numberline.



Multiplying of two digits by one

e.g I

$$\begin{array}{r} 1 \quad 6 \\ \times \quad 2 \\ \hline 3 \quad 2 \end{array}$$

Multiplying 6 ones by 2 = $6 \times 2 = 12$

Write 2 under one, take 1 ten to tens. Multiplying 1 ten by 2 then add one.

$$(1 \times 2) + 1 = 2 + 1 = 3$$

Example II

$$124 \times 6 = \text{expand } 124 \quad 100 \rightarrow 20 + 4$$

$$\begin{array}{rcl}
 100 \times 6 & = & 600 \\
 20 \times 6 & = & 120 \\
 4 \times 6 & = & \underline{+24} \\
 & & \underline{744}
 \end{array}$$

Multiplying two digits by two.

Example: 1

$$\begin{array}{r}
 12 \times 13 \\
 12 \\
 \times 13 \\
 36 \\
 \underline{+ 120} \\
 \underline{156}
 \end{array}$$

Example 2

$$\begin{array}{rcl}
 12 \times 13 & \text{Expand 12} & 10 + 2 \\
 & & 10 \times 13 = 130 \\
 & & 2 \times 13 = \underline{+ 26} \\
 & & \underline{156}
 \end{array}$$

Word sum in multiplication

Word sums will be handled as well.

Ref:

1. Primary school MTC Bk 3 pg 36 – 37.
2. Primary MTC for Uganda Bk 3 pg 43, 60 – 74.
3. Primary Mathematics Bk 3 pg 40.

Division of numbers one by one

Introduction of division.

$$2 \div 2 = 2$$

Children will share objects to learn division of numbers.

Division of numbers two by one.

Children should be able to:-

1. Drawing multiplication tables up to 9.
2. Divide given numbers correctly.

Example 1

$$\begin{array}{r}
 17 \\
 2 \overline{) 34} \\
 \underline{1 \times 2 = 2} \\
 14 \\
 \underline{2 \times 7 = 14} \\
 0
 \end{array}$$

Example 2

$$\begin{array}{r}
 26 \\
 2 \overline{) 52} \\
 \underline{2 \times 2 = 4} \\
 12
 \end{array}$$

X	2
1	2
2	4
3	6
4	8
5	10
6	12
7	14
X	2
1	2
2	4
3	6
4	8
5	10

$$6 \times 2 = -12$$

Long Division

Divide given numbers correctly.

$$\begin{array}{r}
 101 \\
 2 \overline{) 202} \\
 \underline{1 \times 2 = 2} \\
 0 \\
 \underline{0 \times 2 = 0} \\
 02 \\
 \underline{1 \times 2 = 2} \\
 0
 \end{array}$$

x	2
0	0
1	2
2	4

Word sums in division.

Word sums will be handled as well.

TOPICAL TEST

- Add; $25 + 33$.
- Subtract 20 from 100.
- A class was given 24 pencils to share. If there are 4 pupils in the class, how many pencils does each pupil receive?
- What is the difference between 96 and 69.
- 432 seedlings were planted in 4 gardens. Each garden got the same number of seedlings. How many seedlings were planted in each garden?
- Multiply; 148

$$\begin{array}{r}
 \times 5 \\
 \hline
 \end{array}$$
- Workout; 23

$$\begin{array}{r}
 \times 5 \\
 \hline
 \end{array}$$
- Divide;

$$\begin{array}{r}
 7 \overline{) 252} \\
 \hline
 \end{array}$$
- A farmer sells 245 bunches of bananas to a school in a week. How many bunches of banana will be sold in 4 weeks?
- Add;

$$\begin{array}{r}
 267 \\
 + 143 \\
 \hline
 \end{array}$$

THEME FOUR

ENVIRONMENT AND WEATHER IN OUR SUB COUNTY

Number facts sequences

Even numbers

They leave no remainders when divided by 2. Zero is an even number and it is the first even number.

e.g

$$0 \div 2 = 0$$

$\therefore 0$ is an even number.

0, 2, 4, 6, 8, 10,

Odd numbers

Numbers that cannot be exactly divided by 2 are odd numbers. The first odd number is one.

E.G

$$3 \div 2 = 1 \text{ remainder } 1$$

$\therefore 3$ is an odd number.

Odd numbers less than 13.

1, 3, 5, 7, 9, 11,

Prime numbers

These are numbers that have two factors, One and itself.

e.g $1 \times 2 = 2$, $1 \times 3 = 3$

$\therefore 2$ and 3 are prime numbers.

Prime numbers include;

2, 3, 5, 7, 11, 13, 17,

Counting numbers

They are numbers we use to count. They are also called Natural numbers. Natural numbers include;

1, 2, 3, 4, 5, 6, 7, 8, 9,

Whole numbers

These are like counting numbers but they begin with zero. The following is a list of whole numbers.

0, 1, 2, 3, 4, 5, 6, 7, 8,

Workout missing numbers using the four rules of numbers

The number pattern tend to follow a certain sequence numbers,

0, 2, 4, 6, 8,

The next number was got by adding.

Begin from 0.

$$0 + 2 = 2$$

$$2 + 2 = 4$$

$$4 + 2 = 6$$

$$6 + 2 = 8$$

$$8 + 2 = 10$$

$$10 + 2 = 12$$

$\therefore 0, 2, 4, 6, 8, \underline{10}, \underline{12}, \underline{14}$.

12, 10, 8, 6, __, __

Keep on subtracting 2.

$$12 - 2 = 10$$

$$10 - 2 = 8$$

$$8 - 2 = 6$$

$$6 - 2 = 4$$

$$4 - 2 = 2$$

$\therefore 12, 10, 8, 6, 4, 2, \underline{\quad}$

Division and multiplication will be handled in the same way.

Multiple of natural numbers

These are products of a given table.

$$M_2 = 2, 4, 6, 8, \underline{\quad}, \underline{\quad}$$

$$M_3 = 3, 6, 9, 12, \underline{\quad}$$

Factors of Numbers

Factors are numbers which are multiplied to give us a product (multiple).

$$1 \times 2 = 2$$

-1 and 2 are factors of 2.

$$2 \times 3 = 6$$

-2 and 3 are factors of 6.

Finding L.C.M

L.C.M is Lowest Common Multiple, listing multiples of given numbers then sort out common multiple which we get the L.C.M.

$$M_3 = 3, 6, 9, 12, 15, \dots, \text{etc.}$$

$$M_2 = 2, 4, 6, 8, 10, 12$$

$$C.M = 6, 12$$

$$L.C.M = 6$$

Magic squares

Each row, columns and diagonal add up to the same number which we call a magic number.

$$6 + 1 + 8$$

6	a	2
1	b	c
8	d	e

$$b + 8 + 2 = 15$$

$$b + 10 = 15.$$

$$b + 10 - 10 = 15 - 10$$

$$\underline{b = 5}$$

$$c + 1 + 5 = 15$$

$$c + 6 = 15$$

$$c + 6 - 6 = 15 - 6$$

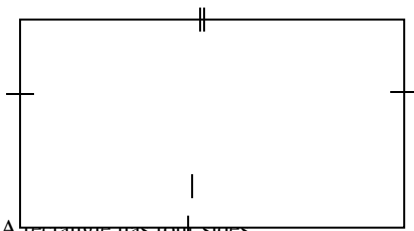
$$\underline{c = 9}$$

THEME FIVE AND SIX

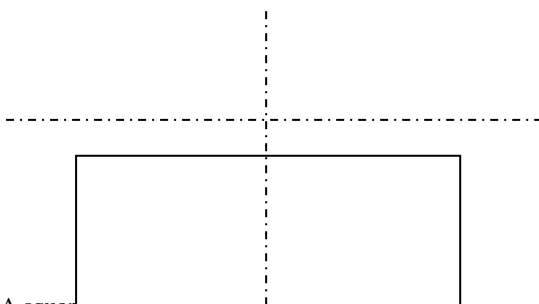
LIVING THINGS: ANIMALS AND PLANTS IN OUR ENVIRONMENT

GEOMETRY

Rectangle

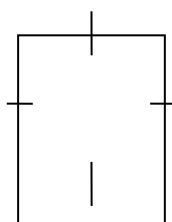
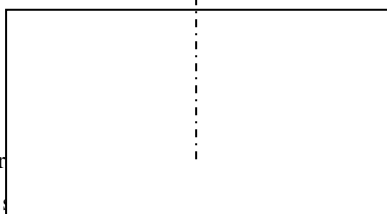


1. A rectangle has four sides.
2. The two opposite sides of a rectangle are equal.
3. A rectangle has 2 lines of symmetry.

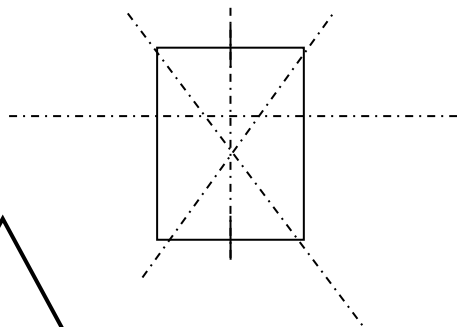


Square

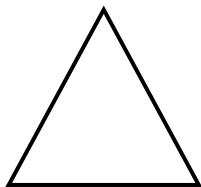
1. A square
2. All the



3. A square has four lines of symmetry.



Triangle

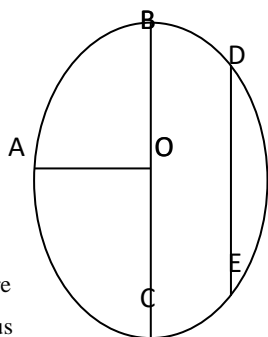


A triangle has three sides.

A triangle has three vertices.

Circle

A circle has the following.



O = Centre

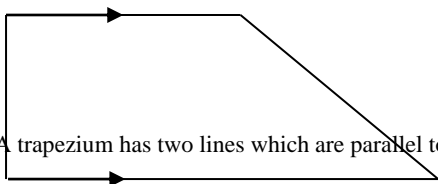
AO = Radius

BC = Diameter

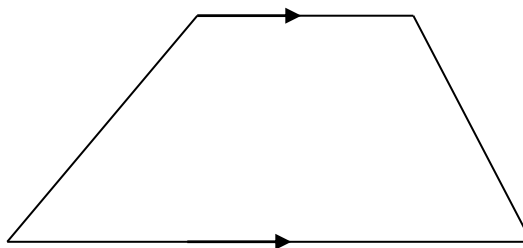
DE = Chord

ABCED = Circumference

TRAPEZIUM



A trapezium has two lines which are parallel to each other.



GREENHILL ACADEMY

SECOND TERM LESSON

NOTES

FOR

MATHEMATICS

TOPIC BREAKDOWN

THEME: SEVEN, MANAGING RESOURCES IN OUR ENVIRONMENT

Fractions

- Definition
- Names and parts of fractions
- Types of fractions
 - a) Proper
 - b) Improper
 - c) Mixed fractions

Writing fractions in words and vice versa.

- Finding the shaded and unshaded fractions.
- Equivalent fractions
- Addition of fractions
- Subtraction of fractions
- Multiplication of fractions

THEME: EIGHT; KEEPING PEACE IN OUR SUB-COUNTRY / DIVISION

Measures

- Time
- Months, weeks and days
- Telling time by hours, half an hour, a quarter past and quarter to.
- Minutes past and to.
- Changing hours to minutes and vice versa.
- Adding hours and minutes
- Changing days to week s and vice versa.
- Adding days and weeks.
- Subtracting days and weeks.
- Duration.

THEME NINE; CULTURE AND GENDER

Graphs

- Pictographs – Using pictures to show information.



Stands for 10 books

1 book stands for 10 books.

- Bar graphs / column

THEME TEN; OUR HEALTH

Measures

Money

- Background
- Conversion of units
- Addition of money
- Word sums
- Subtraction of money
- Multiplication of money
- Division of money
- Shopping

Geometry

Simple planes

- Kite
- Cone
- Cylinder
- Rhombus
- Parallelogram
- Semi-circle

THEME SEVEN; MANAGING RESOURCES

Fractions

A fraction is a part of a whole.

The whole is always cut or divided into equal parts.

Names and parts of a fraction.

- Numerator top number
- Denominator bottom number.
- A whole number.

Ref:

- 1. Primary MTC bk 3.**
- 2. Primary School Maths bk 3.**

Types of fractions

Proper fractions:- These are fractions that have their top number smaller than the bottom number.

e.g $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{5}$, $\frac{63}{89}$

Improper fractions

These are fractions that have top number bigger than the bottom number.

e.g

$$\frac{4}{3}, \frac{83}{12}, \frac{15}{2}$$

Mixed fractions

These are fractions that have both whole numbers and fractions.

e.g

$$2\frac{1}{4}, 3\frac{2}{5}, 4\frac{1}{3}$$

- Ref:**
1. Tr's Collections
 2. National Primary School Curriculum for Uganda.

Writing fractions in words

$\frac{1}{2}$ - a half

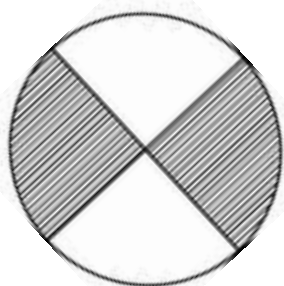
$\frac{1}{5}$ - One fifth or a fifth

Writing word fractions in figures

1) Three seventh = $\frac{3}{7}$

2) Four ninths = $\frac{4}{9}$

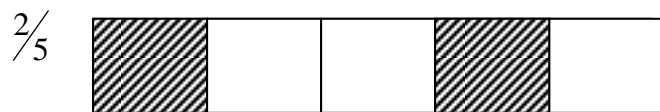
Shaded and unshaded fractions



2 of the 4 parts shaded $\frac{2}{4}$

2 of the 4 parts unshaded $\frac{2}{4}$

Drawing and shading given fractions

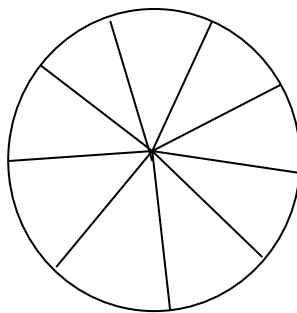
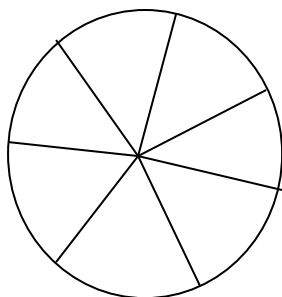


Ref:

1. Understanding MTC Bk 3 pg 46 – 49.
2. MK Primary Mathematics 2000 Bk 3 page 97 – 98.

Comparing fractions

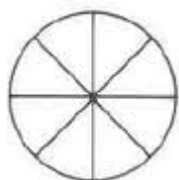
$\frac{1}{7}$ and $\frac{1}{9}$



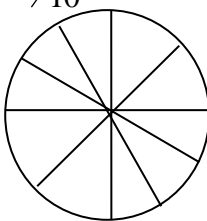
$\frac{1}{7}$ is greater than $\frac{1}{9}$.

Which is smaller

$\frac{1}{8}$



$\frac{1}{10}$



$\frac{1}{10}$ is smaller than an eighths ($\frac{1}{8}$)

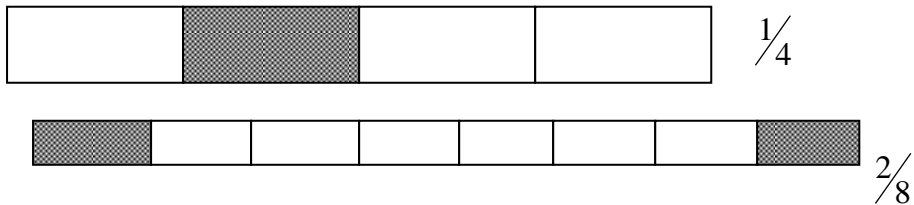
Ref:

1. Understanding Mathematics Bk 3 pag 50-51.

2. Primary Mathematics Bk 3 Pg 99.

Equivalent fractions

These are fractions which give the same number.



Ref:

- 1. Understanding MTC Bk 3 pg 54.**
- 2. Primary School MTC Bk 3.**

Addition of fractions

$$\frac{1}{2} + \frac{1}{2} = \frac{1+1}{2} = \frac{2}{2} = 1$$

Ref:

- 1. Understanding MTC Bk 3 pg 52.**
- 2. MK Bk 3 pg 101 – 104.**

Subtraction of fractions

1. $\frac{3}{4} - \frac{1}{4} = \frac{3-1}{4} = \frac{2}{4}$

