

MATH HORMISDALLEN SCHOOL
SCHEME OF WORK FOR P.4 MATHEMATICS TERM I 2020

WK	PD	THEME	SUB THEME	CONTENT	SUBJECT COMPETECIES	LANGUAGE COMPETENCIES	METHODS	LIFE SKILL	T/L AIDS	T/L ACTS	REF
1	1	S E T C O N C E P T	Revision of sets	- Revision of sets; Definition of: - (a) Set (b) Elements - Naming sets - Counting number members in a set listing elements of a set	<ul style="list-style-type: none"> Group objects of a set. Draws objects. Identifies sets. Listing of members in a set 	<ul style="list-style-type: none"> Defines a set. Names of types of sets. 	Guided discussion Demonstration Illustration Explanation	<ul style="list-style-type: none"> Critical thinking Effective communication. Creative thinking. 	Real objects coins, tins, pens, books, charts etc.	-Grouping -Drawing -Counting -Oral discussion	A new MK primary MTC book 4 pg 1.
			Types of sets	Types of sets <ul style="list-style-type: none"> Equal sets and equivalent sets. Empty sets. Equivalent and non equivalent Even and odd sets 	<ul style="list-style-type: none"> States examples of different types of sets. Identifies types of sets. 	<ul style="list-style-type: none"> Defines the types of sets. Names the different types of sets. Give oral examples of empty sets 	Demonstration Explanation	<ul style="list-style-type: none"> Creative thinking. Effective communication Critical thinking 	<ul style="list-style-type: none"> Real objects A chart 	-Matching - Drawing -Naming sets -Listing members.	New MK primary MTC book 4 pg 1-5
	2		Intersection of sets	<ul style="list-style-type: none"> Symbol for intersection. Drawing venn diagrams and shading. Listing members in the intersection. Number of elements in the intersection set. 	<ul style="list-style-type: none"> Writes the symbol for intersection. Draws venn diagrams. Shades the intersection. Lists members. 	<ul style="list-style-type: none"> Defines intersection sets. Describes the shaded part. 	Illustration Demonstration Guided discussion.	Creative thinking Logical thinking	Real objects. A chart showing intersection part.	-Drawing and shading. - Listing members in the intersection	MK primary MTC book 4 pg9 - 11

2	1		Union and intersection of sets	<ul style="list-style-type: none"> Symbol for union. Drawing, shading and listing of members in the union set. Number of elements in the union set. 	<ul style="list-style-type: none"> Writes the symbols for unionsets . Draws venn diagrams. Shades the union set. Lists members in the union set. 	<ul style="list-style-type: none"> Defines a union set. Describes the shaded regions. 	<ul style="list-style-type: none"> -Think pair share. -Guided discussion. - Demonstration 	<ul style="list-style-type: none"> Decision making. Effective communication creativity 	<ul style="list-style-type: none"> Real objects A chart 	<ul style="list-style-type: none"> Drawing and shading. Listing members in the union 	MK Pri MTC bk. 4 pg. 13 - 15
2	1	S E T S C O N C E P T	Difference of sets	Interpret symbols and find (i) $A - B$ (ii) $B - A$ (iii) $n(A-B)$ (iv) $n(B-A)$	<ul style="list-style-type: none"> Interprets the concept of the difference of sets. Shades the regions. Draws the regions. 	<ul style="list-style-type: none"> Counts the numbers of members in; $A - B$ $B - A$ Describes the shaded parts. 	<ul style="list-style-type: none"> Guided discussion Demonstration Discovery Illustration 	<ul style="list-style-type: none"> Effective communication. Critical thinking. Creativity 	<ul style="list-style-type: none"> Real objects. A chart 	<ul style="list-style-type: none"> Drawing Shading Listing Counting 	New MK primary MTC book 4 page 13-15
			Sub sets	<ul style="list-style-type: none"> Number of members in a set. Listing members in a set. Listing subsets in a set. 	<ul style="list-style-type: none"> Lists members in a set. Writes the symbol of subject. Lists the subsets in a set. 	<ul style="list-style-type: none"> Defines a subset. Counts the number of subsets. 	<ul style="list-style-type: none"> Guided discussion. Demonstration. Discovery. 	<ul style="list-style-type: none"> Creativity. Effective communication. Critical thinking. 	<ul style="list-style-type: none"> Real objects A chart 	<ul style="list-style-type: none"> Listing Drawing Counting 	New MK Primary MTC bk 4 pg. 21
		NUMBER ATION SYSTEM AND PLACE VALUE	Place values	Reading and counting numbers Place values. (a) In words. (b) In figures. Example <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;">4</div> <div style="margin-right: 10px;">5</div> <div style="margin-right: 10px;">6</div> <div>3</div> </div> <div style="margin-left: 150px;"> Ones Tens Hundreds Thousands </div>	<ul style="list-style-type: none"> Identifies the place values. Writes the place values. 	<ul style="list-style-type: none"> Read the place values in words and in figures. Counts in tens from 10-200 Names place values 	<ul style="list-style-type: none"> Guided discussion. Group illustration. 	<ul style="list-style-type: none"> Creative thinking. Effective communication. Decision making. 	<ul style="list-style-type: none"> Abacus Place value chart. 	<ul style="list-style-type: none"> Identifying place values. Writing place values. 	New MK Primary MTC book 4 pg 19 – 20.

						from ones to tens thousands					
			Place values of digits in numbers.	<p>Values of digits in numbers. Example 1 What is the value of each in the number</p> <p>7 4 6 3 2 Tth Th H TO</p>	<ul style="list-style-type: none"> Identifies the place values of digits. Writes the place values on each digit. Multiplies digits by their place values. Writes the values. 	<ul style="list-style-type: none"> Reading values in words. 	<ul style="list-style-type: none"> Guided discovery Demonstration. Illustration. 	<ul style="list-style-type: none"> Creative thinking. Effective communication. Discussion making. 	<ul style="list-style-type: none"> Place value chart. Abacus. 	<ul style="list-style-type: none"> Identifying place values. Multiplying of digits by P.V. Writing values. 	New MK Primary MTC Bk 4 pg 21.
		N U M B E R A T I O N S Y S T E M A N D	Expanding of numbers	<p>Expanding of numbers</p> <ul style="list-style-type: none"> Using place values Using values. 	<ul style="list-style-type: none"> Identifies place value. Writes the values. Writes in expanded form. 	<ul style="list-style-type: none"> Reads the place values. Reads the values. 	<ul style="list-style-type: none"> Illustration. Discovery Group work 	<ul style="list-style-type: none"> Effective communication. Logical thinking Decision making 	<ul style="list-style-type: none"> A place value chart. 	<ul style="list-style-type: none"> -Identifying values. -Writing values. -Expanding numbers. 	New MK primary MTC bk 4 pg 21.
3	1		Expanded numbers	<p>What number has been expanded (7 x 1000) + (4 x 100) + (3 x 10) + (8 x 1)</p>	<ul style="list-style-type: none"> Multiplies the numbers correctly. Adds the numbers. Identifies the expanded number. 	<ul style="list-style-type: none"> Reads the figures. Reads the expanded number. 	<ul style="list-style-type: none"> Guided discovery. Group work. Illustration. 	<ul style="list-style-type: none"> Effective communication. Logical reasoning. 	<ul style="list-style-type: none"> Place value chart. 	<ul style="list-style-type: none"> -Multiplying -Adding -Identifying 	New MK primary MTC book 4 pg 24
	2		Writing words in figures and vice versa	<ul style="list-style-type: none"> Writing figures in words. Writing words in figures. 	<ul style="list-style-type: none"> Writes figures in words. Writes words in figures. 	<ul style="list-style-type: none"> Reads figures correctly. Reads words 	<ul style="list-style-type: none"> Explanation Guided discovery Discussion. 	<ul style="list-style-type: none"> Effective communication. Creative thinking. 	<ul style="list-style-type: none"> Place value chart. 	<ul style="list-style-type: none"> -Writing -Reading -Arranging digits. 	New MK primary MTC bk 4 pgs. 22-23

		P L A C E V A L U E				correctly.		▪ Logical reasoning.			
			Rounding off of whole numbers	<ul style="list-style-type: none"> ▪ Rounding off to the nearest tens. ▪ Rounding off to the nearest hundreds. ▪ Rounding off to the nearest thousands. 	<ul style="list-style-type: none"> ▪ Mentions the meaning of approximate. ▪ Rounds off numbers to the nearest tens / hundreds. 	<ul style="list-style-type: none"> ▪ Mentions the meaning of approximate. ▪ Reads the number given. 	<ul style="list-style-type: none"> ▪ Discovery ▪ Discussion ▪ Illustration 	<ul style="list-style-type: none"> ▪ Logical thinking. ▪ Critical thinking. ▪ Effective communication. 	▪ Place value chart.	-Rounding off to the nearest tens / hundreds.	New MK primary MTC bk 5 pages 54 - 55
	3		Roman numerals	<ul style="list-style-type: none"> ▪ Basic roman numerals. ▪ Roman numerals got by repeating x, c ▪ Roman numerals got by adding subtracting. 	<ul style="list-style-type: none"> ▪ Identifies roman numerals. ▪ Adds the Roman numerals. ▪ Subtracts the Roman numerals. 	<ul style="list-style-type: none"> ▪ Recites the roman numerals. ▪ Mentions the Roman numerals obtained. 	<ul style="list-style-type: none"> ▪ Explanation ▪ Discussion ▪ Discovery. 	<ul style="list-style-type: none"> ▪ Creative thinking. ▪ Problem solving. ▪ Logical thinking. 	▪ Chart showing Roman numerals.	-Reciting the Roman numerals.	New MK Primary MTC bk 4 pg 33
	4		Roman numerals	<ul style="list-style-type: none"> ▪ Changing from Hindu Arabic numerals to Roman numerals. ▪ Changing from Roman numerals to Hindu Arabic numerals. ▪ Word problems about Roman and Hindu Arabic numerals. 	<ul style="list-style-type: none"> ▪ Writes the Hindu Arabic numerals in Roman numerals. ▪ Writes the Hindu Arabic numerals correctly. ▪ Writes the Roman numerals in Hindu Arabic. 	<ul style="list-style-type: none"> ▪ Recites the Roman numerals. ▪ Reads the statements given correctly. 	<ul style="list-style-type: none"> ▪ Explanation ▪ Discussion ▪ Discovery. 	<ul style="list-style-type: none"> ▪ Creative thinking. ▪ Problem solving. ▪ Logical thinking. 	▪ Chart showing Roman numerals.	-Writing the Roman numerals. -Reading the statement given.	New MK Primary MTC bk 4 pg. 34-35.
				▪ Addition and	▪ Adds Roman	▪ Reads the	▪ Guided	▪ Problem		-Adding	New

				subtraction of roman numerals.	<ul style="list-style-type: none"> Subtracts roman numerals. 	given word problem. <ul style="list-style-type: none"> Recites the Roman numerals. 	discussion <ul style="list-style-type: none"> Illustration Discovery. 	solving. <ul style="list-style-type: none"> Creative thinking. Logical thinking. 		roman numerals. Subtracting roman numerals.	MK Pri MTC bk 4 page 35 Oxford pribk 4 page 67.
4	2	OPERATION ON WHOLE NUMBERS	Adding up to ten thousand	Addition <ul style="list-style-type: none"> Without word problems. With word problems. 	<ul style="list-style-type: none"> Adds numbers without word problem correctly. Adds numbers with word problems correctly. 	<ul style="list-style-type: none"> Reads numbers in words. Interprets the word problem given. 	<ul style="list-style-type: none"> Explanation. Guided discussion. Guided discovery. 	<ul style="list-style-type: none"> Problem solving. Logical thinking. Creative thinking. 	<ul style="list-style-type: none"> Flash cards showing numbers for addition. 	Adding numbers. Reading the word problem.	New MK MTC Bk. 4 pages 38 - 41
			Subtracting up to ten thousand	<ul style="list-style-type: none"> Subtraction. Without regrouping. With regrouping. 	<ul style="list-style-type: none"> Subtracts numbers without regrouping. Subtracts numbers with regrouping. 	<ul style="list-style-type: none"> Reads the numbers in words correctly. Uses the new words to make correct sentences 	<ul style="list-style-type: none"> Explanation. Guided discovery. Guided discussion. 	<ul style="list-style-type: none"> Effective communication 	<ul style="list-style-type: none"> Flash cards showing numbers for subtraction Using abacus 	Subtracting numbers with or without regrouping.	New MK primary MTC bk pages 42 - 43.
5	2	OPERATION	Subtracting up to ten thousand	<ul style="list-style-type: none"> Subtraction with regrouping. 	<ul style="list-style-type: none"> Subtracts numbers with regrouping. Arranges numbers according to their correct place values. 	<ul style="list-style-type: none"> Reads the numbers given in words. Arranges numbers according to their correct. 	<ul style="list-style-type: none"> Explanation. Guided discovery. Guided discussion 	<ul style="list-style-type: none"> Problem solving. Logical thinking. Creative thinking. 	<ul style="list-style-type: none"> Flash cards showing numbers for subtraction 	Subtracting with regrouping.	New MK primary MTC bk 4 pg 43 - 44
	3		Multiplication	Multiplication <ul style="list-style-type: none"> Multiplication as repeated addition. By multiples of 	<ul style="list-style-type: none"> Multiplies given problem. Identifies the multiples of ten. 	<ul style="list-style-type: none"> Reads the word problem. Recites the multiples of 	<ul style="list-style-type: none"> Explanation. Discussion Discovery. Rote method 	<ul style="list-style-type: none"> Creative thinking. Logical thinking. Problem 	<ul style="list-style-type: none"> Counters. Multiplication table. 	Multiplying numbers	New MK primary MTC bk 4

		I O N		ten 90, 80. 70 ... • Three digit figures by one digit. • Two digit figures by 2 digits. • Multiplication on word problems.		ten. ▪ Uses correct mathematical terms for multiplication e.g 2 multiplied by 3		solving.			pages 46 - 51
6		N U M B E R S	Division	<ul style="list-style-type: none"> ▪ Division as repeated subtraction. ▪ Without remainders. 	<ul style="list-style-type: none"> ▪ Divides numbers using repeated subtraction. ▪ Divides numbers using long division methods 	<ul style="list-style-type: none"> ▪ Counts the number of times a number has been subtracted 			▪ Counters	Counting numbers that have been divided.	New MK primary maths Bk 4 pages 52 - 55
				<ul style="list-style-type: none"> ▪ Division by one digit number ▪ Division with remainders. ▪ Division by 10s ▪ Word problems. 	<ul style="list-style-type: none"> ▪ Divides numbers using long division methods. 	<ul style="list-style-type: none"> ▪ Recites the multiplication table. ▪ Reads the word problems. 	<ul style="list-style-type: none"> ▪ Discussion ▪ Guided discovery. ▪ Demonstration. 			-Dividing numbers using long division. - Multiplying. Subtracting	New MK Primary MTC Bk 4 pages 53 - 55.
			Average	<ul style="list-style-type: none"> ▪ Average without word problem. ▪ With word problem. 	<ul style="list-style-type: none"> ▪ Solves the number given. ▪ Adds numbers. ▪ Divides the number correctly. 	<ul style="list-style-type: none"> ▪ Reads the number or digits given. ▪ Reads the statement given. 	<ul style="list-style-type: none"> ▪ Explanation. ▪ Guided discussion ▪ Discovery. 	<ul style="list-style-type: none"> ▪ Problem solving. ▪ Critical thinking. ▪ Discussion making. 	▪ Counters in bundles.	Finding the average.	New MK Pr. MTC bk5 pg. 76 - 77
		P A T T E R	Types of numbers	<u>Types of numbers</u> <ul style="list-style-type: none"> ▪ Counting numbers. ▪ Whole numbers. ▪ Even numbers ▪ Odd numbers. 	<ul style="list-style-type: none"> ▪ Identifies the types of numbers. ▪ Finds the missing numbers. 	<ul style="list-style-type: none"> ▪ Recites the numbers. ▪ Counts numbers correctly. 	<ul style="list-style-type: none"> ▪ Explanation. ▪ Guided discussion ▪ Discovery. 	<ul style="list-style-type: none"> ▪ Problem solving. ▪ Critical thinking. ▪ Discussion making. 	▪ Chart showing examples of the types of numbers.	Giving types of numbers.	New MK primary MTC bk 4 pg. 61.
			Number sequences	Number sequences <ul style="list-style-type: none"> ▪ By adding numbers like 2, 	<ul style="list-style-type: none"> ▪ Identifies the next numbers by adding. 	<ul style="list-style-type: none"> ▪ Counts numbers. ▪ Mentions 			▪ Chart showing number	Finding the next number in	New MK Pr. MTC

		N S		4, 6, ... ▪ By subtracting numbers like 6, 4, 2.....	▪ Identifies the next number by subtracting.	the next number in the sequence.			sequences.	the sequences.	bk4 pages 61 – 62
7	1	A N D		Number sequences ▪ By subtracting numbers like 6, 4, 2. ▪ Find missing numbers in a sequence	▪ Identifies the next number in the sequence by subtracting.	▪ Counts numbers. ▪ Mentions the next number in the sequences	▪ Explanation ▪ Discussion ▪ -Guided discovery	▪ Problem solving. ▪ Logical thinking. ▪ Creative thinking	▪ Chart showing number sequences	Finding the next number in the sequences	New MK. Pr. MTC bk 4 pg. 62-63
	4	S E Q U E N C E S	Multiples	Multiples ▪ Listing multiples of given numbers. ▪ Common multiples. ▪ Lowest common multiples. ▪ Counting in tens, hundreds and thousands. ▪ Multiplying by 10, 100 and 1000. ▪ Multiplying by multiples of 10. ▪ Factors of numbers ▪ GCF if numbers ▪ Completing tables	▪ Finds the multiples of various numbers. ▪ Lists the common multiples. ▪ Multiples various numbers like 10, 100, 1000	▪ Defines multiples. ▪ Mentions the multiples of various numbers. ▪ Counts in tens, hundreds and thousands .				Finding the multiples.	New MK Pr. MTC bk 4 pg 64 - 71
7	4	Numbe r facts and sequen ces	Magic square.	▪ Magic square	▪ Completes the magic square	▪ Find the value of the missing numbers			▪ Chart showing magic square.	Finding the missing numbers in the magic square.	Old MK Pr. MTC bk 4 pg. 72-73 Unders tanding MTC bk 4 pg 88.

TOPICAL BREAKDOWN FOR P.4 MATHEMATICS TERM I 2016

THEME	TOPIC	SUB-TOPIC	DURATION	OUT COMES
SETS	SET CONCEPT	<ul style="list-style-type: none"> Types of sets . Empty Equal Equivalent Forming sets Listing members in sets Finding number of members Finding common members. Union of sets Shading and describing shaded regions. - Representing information on the venn diagram - Interpreting information on the venn diagram 	1 ½ (1 – 2)	<ul style="list-style-type: none"> The learner is able to demonstrate the knowledge of sets to the problems in real life situations.
NUMERACY	WHOLE NUMBERS	<ul style="list-style-type: none"> Place values of numbers up to 99. 999 Values of numbers Sum and difference of values of digits. Expanding whole numbers using place values and values Finding the expanded number Writing in words Writing in figures Round off to the nearest tens, hundreds and thousands Roman numerals up to 100 Application of Roman numerals. Hindu Arabic numerals 	2 wks (3- 4)	<ul style="list-style-type: none"> The learner is able to appreciate the need to count in everyday life .
	OPERATION ON WHOLE NUMBERS	<ul style="list-style-type: none"> Addition of whole numbers up to 99999 with and without neighbouring Word problem about addition Subtraction of whole numbers up to 99999 with and without regrouping. Word problem on subtraction Multiplication as repeated addition. Multiplication of whole numbers up to 3 digital distributed by 1 and 2 	3 weeks (5 – 7)	<ul style="list-style-type: none"> The learner is able to use the four basic operations to solve problems.
		<ul style="list-style-type: none"> World problem on multiplication. Division as repeated subtractions. Division of whole numbers by 1 digit numbers. without a remainder With a remainder Division on word problems Division of whole numbers by 10 Average Word problem involving division; 		<ul style="list-style-type: none">

	PATTERNS AND SEQUENCE	<ul style="list-style-type: none"> • Types of numbers (even and odd) • Finding sum, product and difference of numbers /even and odd. • Sequence of numbers. • Increasing progression (addition and multiplication) • Decreasing progression (Subtraction) 	2 weeks (8 – 9)	<ul style="list-style-type: none"> • The learner is able to able to relate and apply simple computation skills involving patterns and sequences in real life situation
		<ul style="list-style-type: none"> • Multiples of numbers • LCM • Multiples of 10, 100, and 1000 • Factors of numbers. • Finding GCF of numbers. • Completing tables (wheels) • Magic squares 		

SIR APOLLO KAGGWA SCHOOLS
LESSON NOTES FOR MATHEMATICS P.4 TERM I 2017

LESSON 1**TOPIC I: SET CONCEPTS****SUB TOPIC: REVISION OF SETS****CONTENT: Definition**

A set is a collection of well defined objects.

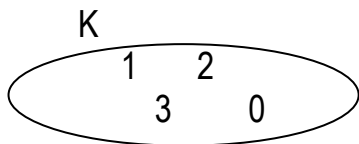
An element is an object or a thing which belongs to a set.

Naming sets

- A set of tomatoes
- A set of bags
- A set of oranges

Listing members in a set

Eg.



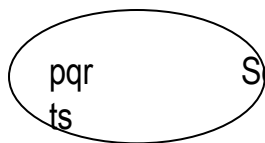
List the members of set K

Set K = {0,1,2,3}

Counting members in a set

Examples

B



Set B has 5 members therefore $n(B) = 5$ members

$\therefore n(B) = 5$ members

X = {r, s, t} set X has 3 members

Therefore $n(x) = 3$ members.

ACTIVITY: Exercise on page 1 Nos. 1 – 8 (MK MTC bk 4)

Remarks.

Equivalent sets.

Equivalent sets are sets with the same number of members but they are not the same.

Examples:

Set A = (a, b, c, d) B = (1, 2, 3, 4)

Set A and B are equivalent sets.

Symbol \longleftrightarrow

Non equivalent sets

Set K = {0, 2, 4, 6, 8}

Set M = {1, 3, 5, 6}

Set K \nleftrightarrow set M

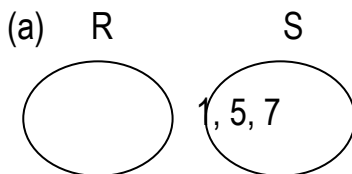
ACTIVITY: Exercise 1G page 8 (MK New Edition)

LESSON 4:**CONTENT: EMPTY SETS**

Empty sets are sets which do not have members or a set whose members cannot be found.

NB: Empty sets are also called “Null sets”

Symbol \emptyset or { }

Examples

Set R is an empty set.

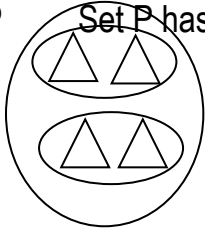
(b) A set of goats with 5 legs each is an empty set.

ACTIVITY: Exercise 1b and 1 C page 2 (Mk New edition)

Remarks.

LESSON 5:**CONTENT: Even and Odd sets.**

Even sets are sets whose members can all be paired

Example:**P**

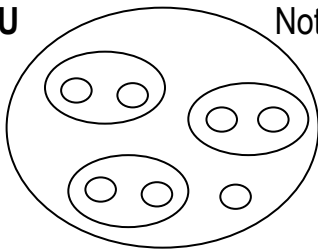
Set P has 4 members.

Members of set P have all been paired, therefore it is an even sets.

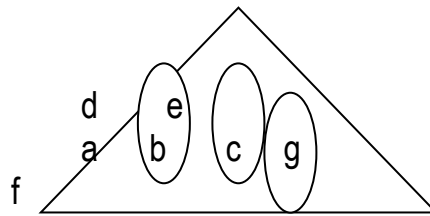
Note:An empty set is an even set.

Odd sets

Odd sets are sets whose members can not all be paired. i.e they give a remainder when their members are paired.

Example:**U**

Not all members of set U have been paired. Therefore it is an odd set.



ACTIVITY: Exercise 1(d) and 1 (e) page 3 and 4 (New Edition of MK)

Remarks:

LESSON 6:**SUBTOPIC :INTERSECTION OF SETS.**

CONTENT: Symbol for intersection “ \cap ”

Intersection sets

Examples:

$$P = (a, b, c, d, e) \quad Q = (a, e, i, o, u)$$

$$\text{Find (i) } P \cap Q = (a, e)$$

$$n(P \cap Q) = 2 \text{ elements}$$

Note: Sets without common members are non – intersecting sets.

Identify the common elements by circling or ticking.

Examples

$W = \{1, 2, 3, 4\}$ $N = \{a, b, c\}$

Set W and N are non – intersecting sets.

Note: Use only curly brackets when listing elements of set concepts.

Drawing Venndiagrams and shading the intersection.

Example:-

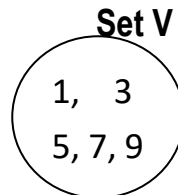
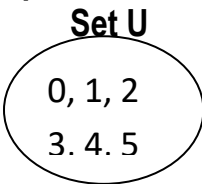
- Shading the intersection set.

**ACTIVITY:**

Exercise 1H page 10 (MK New edition) or Exercise 7 page 10 (Oxford Primary MTC Bk 4)

Remarks**LESSON 7: Listing members in the intersection**

Example:



UV



2. Set D = $\{\textcircled{p}, q, \textcircled{r}, s, t\}$

Set E = $\{f, g, \textcircled{r}, \textcircled{p}\}$

$\therefore D \cap E = \{p, r\}$

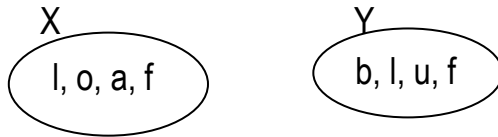
Number of elements in the intersection**Examples:**

Set S = $\{g, o, a, t\}$ $T = \{r, o, t\}$

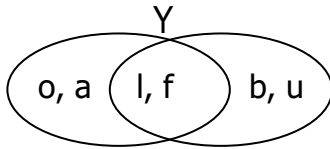
$S \cap T = \{o, t\}$ Therefore; number of elements in the intersection set are 2.

$n(S \cap T) = 2$ elements

Set



X



$$X \cap Y = \{l, f\}$$

$$\therefore n(X \cap Y) = 2 \text{ elements}$$

LESSON 8:

CONTENT: UNION OF SETS AND INTERSECTION

A Union set is a collection of all the members in the given sets.

Symbol; \rightarrow U

Listing of members in union sets.

Examples

If $P = \{a, e, i, o, u\}$ $Q = \{a, b, c, d, e\}$

What is $P \cup Q$?

$$P \cup Q = \{a, e, i, o, u, b, c, d\}$$

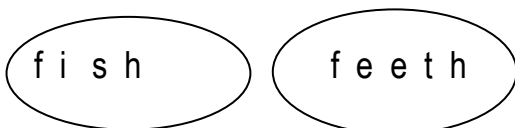
N.B: All common members are written once.

Listing members of the union set

Example:

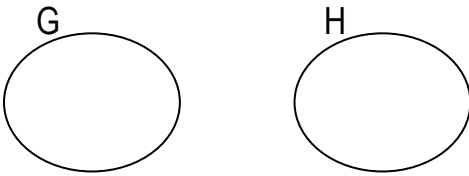
G

H

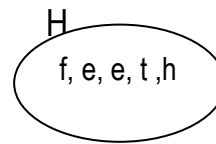
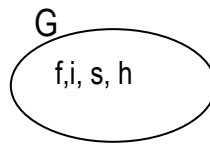
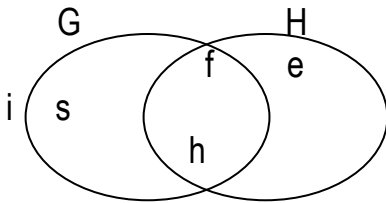
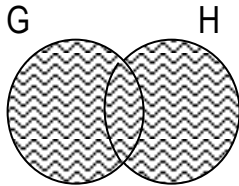


Drawing venn diagrams and shading.

Examples:



Shade $G \cup H$



$$G \cup H = \{i, s, f, h, e, \}$$

\therefore Number of elements in the union set are 5

$n(G \cup H) = 5$ elements.

LESSON 9: DIFFERENCE OF SETS

These are members of a set that exist in only on set .e. set $A - B$ means members of set A only.

Example:

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

B = $\{0, 2, 4, 6, 8\}$

Note: Members of a given set only is got without common members.

Find members of

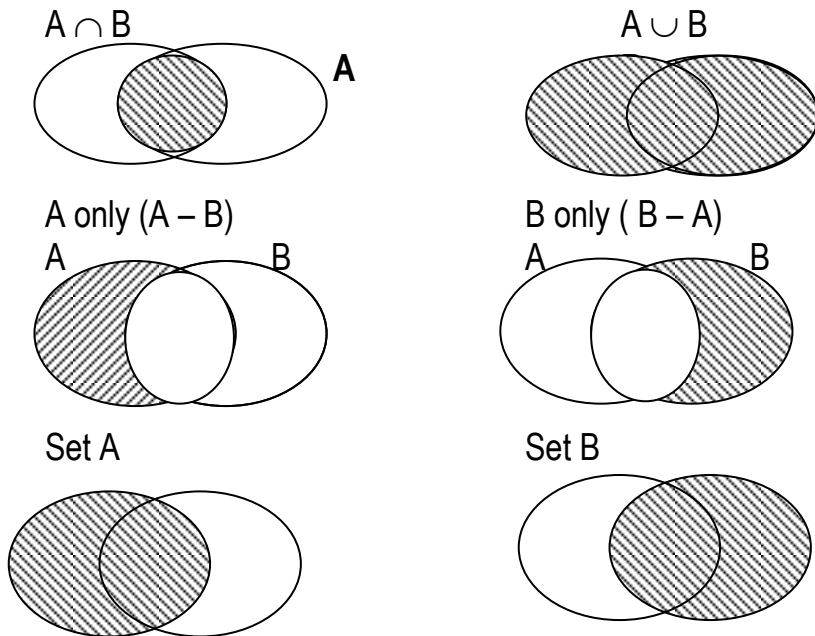
(i) Set A only = $\{1, 3, 5\}$

(ii) Set B only = $\{0, 6, 8\}$

Members of set A only is represented by $A - B$

Members of set B only is shown as $B - A$

Showing the difference of sets on venn diagrams.



ACTIVITY:

Draw and shade these regions

- (i) A but not B
- (ii) $A \cup B$
- (iii) Set B
- (iv) $B - A$
- (v) $A - B$

LESSON 10:

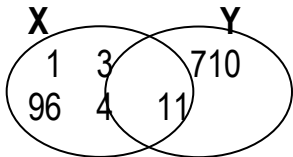
CONTENT: REPRESENTING ELEMENTS ON A VENN DIAGRAM

Examples:

$$X = \{1, 6, 3, 4, 9\}$$

$$Y = \{4, 6, 7, 10, 11\}$$

Represent the two sets on a venn diagram.



List members of

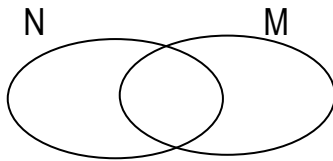
$$X \text{ only} = \{1, 3, 9\}$$

$$Y - X = \{7, 10, 11\}$$

$$X \cap Y = \{4, 6\}$$

ACTIVITYSet $M = \{a, b, c, d, e\}$ $N = \{a, e, i, o, u\}$

(a) Represent the two sets on the venn diagram below



(b) Use your venn diagram to answer the following:-

(i) $M \cap N$ (ii) $M \cup N$ (iii) $n(P)$ only(iv) $n(Q)$ (v) $P - Q$ (vi) $n(Q - P)$ (vii) $n(Q)$ only**REMARKS****LESSON 11:****SUB TOPIC SUBSETS****CONTENT:****Definition**

A subset is a set of members got from a given set.

An empty set is a subset of any set

A set is a subset of itself (its called a super set).

A mother set is also a subset of itself.

At this level only use listing method

Symbol

 \subset

Symbol for not subset

 $\not\subset$

Listing subsets

Set $P = \{1, 2, 3\}$

The subsets are;;

 $\{\}, \{1, 2, 3\}, \{1, 3\}, \{2, 3\}, \{1\}, \{2\}, \{3\}, \{1, 2\},$

LESSON 12

THEME : NUMERACY

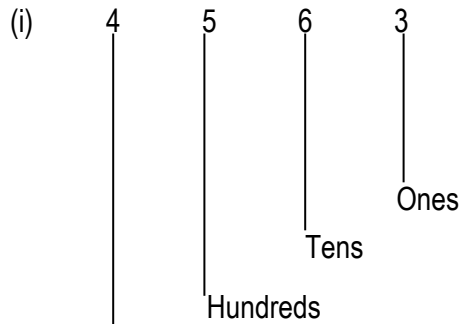
TOPIC: Whole Numbers

(1) In words

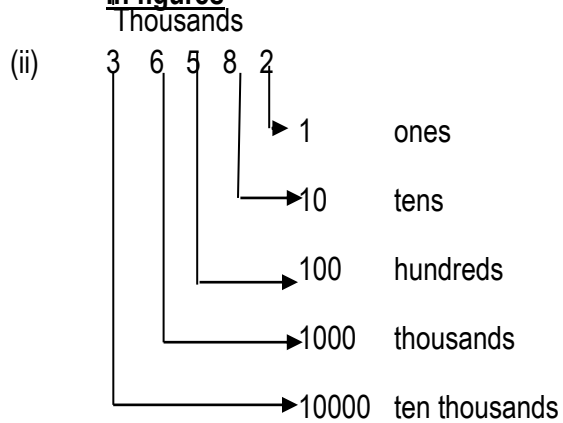
Example

MK Primary Mathematics book 4 (Old Edition)

Exercise 2b page 20.

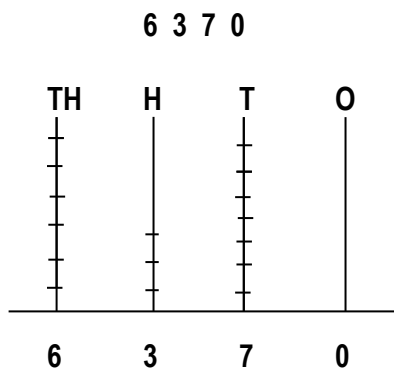


In figures



(iii) Representing numbers on abacus.

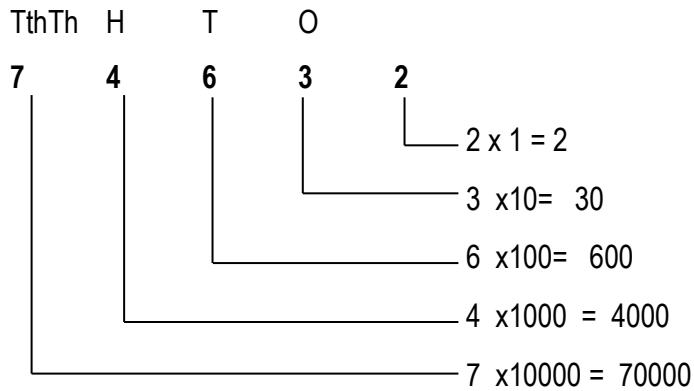
Example



Encourage children to use mainly beads.

LESSON 13**SUBTOPIC: VALUES OF DIGITS IN NUMBERS****Example: 1**

What is the value of each in the number 7 4 6 3 2

**Example 2**

What is the value of 5 in the number
3 1 5 9

**LESSON 14****SUB TOPIC: Expanding numbers using place values**

Example:

1. Expand 3 7 4 6 using its place values

TH	H	T	O
3	7	4	6

1000
 100
 10
 1

Apply all the operations
addition and subtraction of
values

$$(3 \times 1000) + (7 \times 100) + (4 \times 10) + (6 \times 1)$$

Example 2

Expand 623 using place values

H	T	O
6	2	3

6 Hundreds + 2 Tens + 3 Ones

ACTIVITY

Expand these using values

- i) 3408
- ii) 95664
- iii) 8088

Ref

MK Primary Mathematics Book 4 page 24
Exercise 2f

LESSON 15

EXPANDING NUMBERS USING VALUES

Example

Expand 95614 using its values

T/TH	TH	H	T	O
9	5	6	1	4

$$\therefore 95614 = 90000 + 5000 + 600 + 10 + 4$$

ACTIVITY

MK Primary mathematics Book 4 Page 24

LESSON 16:**SUB TOPIC:EXPANDED NUMBERS****Examples:**

(a) What number has been expanded to give
 $(7 \times 1000) + (4 \times 100) + (3 \times 10) + (8 \times 1)$

$7000 + 400 + 30 + 8$ $= \underline{\underline{7438}}$	7000 400 $+ 30$ $\underline{\quad 8}$ 7438
---	--

(b) What number has been expanded to give
 $(2 \times 10000) + (3 \times 1000) + (2 \times 10) + (1 \times 1)$

$20000 + 3000 + 20 + 1$ $= \underline{\underline{23021}}$	20000 3000 20 $\quad + \quad 1$ $\underline{\underline{23021}}$
--	---

ACTIVITY

What number has been expanded.

- (i) $500 + 70 + 2$
- (ii) $3000 + 400 + 90 + 2$
- (iii) $(1 \times 10,000) + (6 \times 100) + (8 \times 10) + (3 \times 1)$
- (iv) $(7 \times 1000) + (9 \times 100) + (4 \times 1)$
- (v) $5000 + 70 + 8$

REMARKS.**LESSON 17****SUBTOPIC : WRITING FIGURES IN WORDS****CONTENT : Example:**

- (i) Write 4 3 2 6 in words

TH	H	T	O
4	3	2	6

Four thousandthree hundredtwenty six

- (ii) Write 65702 in words

TTH	TH	H	T	O
6	5	7	0	2

Sixty five thousand seven hundred two.

Emphasize the spelling of ninety, nineteen , forty, fourteen, thousand.

ACTIVITY

New MK bk 4 pg 18

©LESSON NOTES AND SCHEMES

LESSON 18**SUB TOPIC : WRITING WORDS IN FIGURES****CONTENT****Examples**

(a) Write twelve thousand four hundred seventy two

TH	H	T	O
12	4	7	2

$$\begin{array}{lcl}
 12 & & \\
 | & & \\
 12 & \times 100 & = 12000 \\
 4 & \times 100 & = 400 \\
 7 & \times 10 & = 70 \\
 2 & \times 1 & = 2
 \end{array}$$

$$\begin{array}{r}
 12000 \\
 400 \\
 70 \\
 + 2 \\
 \hline
 12472 \\
 \hline
 \hline
 \end{array}$$

ACTIVITY

New MK bk 4 pg 18

Exercise 2e

REMARKS.

LESSON 19**SUB TOPIC : ROUNDING OFF TO THE NEAREST TENS****Examples**

(a) Round off 92 to the nearest tens

$$\begin{array}{r}
 \text{T} \quad \text{O} \\
 9 \quad 2 \\
 + 0 \quad 0 \\
 \hline
 9 \quad 0
 \end{array}$$

ACTIVITY

New MK Primary Mathematics Bk 4 pg 23-29

(b) 4 3 6

$$\begin{array}{r}
 \text{H} \quad \text{T} \quad \text{O} \\
 4 \quad 3 \quad 6 \\
 + 1 \quad 0 \\
 \hline
 4 \quad 4 \quad 0
 \end{array}$$

REMARKS

LESSON :20**SUB TOPIC : ROUNDING OFF TO NEAREST HUNDREDS AND THOUSANDS****CONTENT****Example:**

- (a) Round off 356 to the nearest hundreds

H	T	O
3	5	6
+ 1	0	0
4	0	0

- (c) Round off 1245 to the nearest hundreds

TH	HT	O
1	2	4
+ 0	0	0
1	2	0

ACTIVITY

New MK Primary Mathematics Bk 4 pg 23-29

REMARKS**LESSON : 21****TOPIC : WHOLE NUMBERS****SUB TOPIC :ROMAN NUMERALS****CONTENT: Basic Roman Numerals****Example:**

Hindu Arabic	Roman Numerals
1	I
2	II
3	III
4	IV
5	V
6	VI
7	VII
8	VIII
9	IX

Hindu Arabic	Roman Numerals
10	X
20	XX
30	XXX
40	XL
50	L
60	LX
70	LXX
80	LXXX
90	XC
100	C

Roman numerals got by repeating 1 or x.

$$2 = I + I = II \quad = \quad 20 = 10 + 10 = XX$$

$$3 = I + I + I = III \quad = \quad 30 = 10 + 10 + 10 = XXX$$

Roman numerals got by adding to 5

$$6 = 5 + I$$

$$7 = 5 + 2$$

$$8 = 5 + 3$$

$$6 = VI$$

$$7 = VII$$

$$8 = VIII$$

The Roman numerals got by subtracting from 5 or from 50.

4 = 1 subtracted from 5

4 = IV

40 = 10 subtracted from 50

40 = XL

The roman numerals got by subtracting from 10 and 100 e.g. 9 = 1 subtracted from 10.

9 = IX

90 = 10 subtracted from 100 = XC

LESSON :22

Changing from Hindu – Arabic numerals to Roman numerals

Examples:

$$\begin{aligned} \text{(a)} \quad 19 &= 10 + 9 \\ &\quad \quad \quad X + IX \\ &= \underline{\underline{XIX}} \end{aligned}$$

$$\begin{aligned} \text{(b)} \quad 44 &= 40 + 4 \\ &\quad \quad \quad XL + IV \\ &= \underline{\underline{XLIV}} \end{aligned}$$

Emphasize
expansion of
Roman numerals

Activity: Mk Primary Mathematics (New Edition book 5 page 30-32

Changing roman numerals into Hindu Arabic numerals.

Example 1

$$\begin{aligned} XIV &= X + IV \\ &= 10 + 4 \end{aligned}$$

$$XIV = 14$$

Example 2

Change XXXIX to Hindu Arabic

$$\begin{aligned} XXXIX &= XXX + IX \\ &\quad \quad \quad 30 + 9 \end{aligned}$$

$$XXXIX = 39$$

ACTIVITY: MK primary mathematics book 4 (New Edition) page 30-32

LESSON :23

SUB TOPIC : WORD PROBLEMS INVOLVING ROMAN AND HINDU ARABI NUMERALS

Example:

(a) Henry's age is 8. Write his age in Roman numerals.

$$8 = VIII$$

(b) Mukiibi's vehicle has been driven for 24 months. Write the months in Roman numerals.

24 months

$$24 = 20 + 4$$

$$24 = XX + IV$$

$$24 = XXIV$$

- c) There are XLIV pupils in a class. Express the number of pupils in Hindu Arabic numerals

ACTIVITY: MK Primary mathematics bk 4 (New Edition) page 30-32

LESSON 24

SUBTOPIC : ADDITION OF ROMAN NUMERALS

Examples

$$\begin{array}{rcl} \text{i)} & IX & + V \\ & = & 9 + 5 \\ & = & 14 \end{array}$$

$$\begin{array}{rcl} \text{(ii)} & 14 & = 10 + 4 \\ & & = X + IV \\ & & = XIV \end{array}$$

$$\begin{array}{rcl} \text{iii)} & XX & + VII \\ & = & 20 + 7 \\ & = & 27 \end{array}$$

$$\begin{array}{rcl} \text{(iv)} & 29 & = 20 + 9 \\ & & = XX + IX \\ & & = XXIX \end{array}$$

- v) Find the sum of IV and XXV

Subtraction of Roman numerals

Examples

$$\begin{array}{rcl} \text{a)} & XXXVI & - \quad XXII \\ & = (30 + 6) - (20 + 2) \\ & & 36 - 22 \\ & & \underline{14} \end{array}$$

$$\begin{array}{rcl} \text{(b)} & 14 & = 10 + 4 \\ & & = X + IV \\ & & = \underline{XIV} \end{array}$$

$$\begin{array}{rcl} \text{(c)} & IX & - V \\ = 9 & - 5 & \\ & \underline{= 4} & \end{array}$$

$$\begin{array}{rcl} \text{(d)} & 45 & = 40 + 5 \\ & & = XL + V \\ & & = \underline{XLV} \end{array}$$

- c) Subtract XII from XXIX

ACTIVITY :

Example 1

$$\text{(a)} \quad XXXIV + XLV$$

$$\text{(d)} \quad XV + XXIX$$

$$\text{(b)} \quad XCII + XL$$

$$\text{(e)} \quad XXV - V$$

$$\text{(c)} \quad XXIV - XVI$$

$$\text{(f)} \quad XLIX - XII$$

Example 2

There are XXIV boys and XIX girls in the class.

- a) Find the total number of pupils in the class
b) How many more boys than girls are in the class?

LESSON 25

THEME: NUMERACY
TOPIC : OPERATION ON WHOLE NUMBERS
SUBTOPIC : Adding up to ten thousand

Examples

1. Add: $7464 + 4425$

Arrange these numbers in their place values

	TH	H	T	O
	7	4	6	4
+	4	4	2	5
	<hr/>			
	11	8	8	9
	<hr/>			

2. Add: $4622 + 5043 + 6231$

	TH	H	T	O
	4	6	2	2
	5	0	4	3
+	6	2	3	1
	<hr/>			
	15	8	9	6
	<hr/>			

ACTIVITY : MK Primary 4 book page 33 exercise 3:1 (New edition)
 Understanding mathematics bk 4 pg 30

LESSON :26

More addition of numbers

Example:

(i) **Add:**

	TH	H	T	O
	1	3	7	8
+	5	8	9	
	<hr/>			
	1	9	6	7
	<hr/>			

- Arrange numbers in their place values
- Add by regrouping all numbers (answers) that exceed 9

(ii)

	TTH	TH	H	T	O
	1	4	3	3	1
+	2	6	5	1	
	<hr/>				
	1	6	9	8	2
	<hr/>				

ACTIVITY: MK Primary mathematics (New Edition) book 4 page 33-37. Exercise 3:3
 Understanding mathematics bk 4 pg 33

LESSON : 27**Addition with word problems****Example:**

1. Alice carried 349 books, her brother carried 578 books. How many books were carried altogether?

Alice carried	=	349 books
Her brother	=	<u>+578 books</u>
Both carried	=	<u><u>927 books</u></u>

2. Maria bought sugar for shs. 15,000. Soap at shs. 800 and a bunch of Matooke at shs. 3500. How much money did she spend?

Sugar	shs.	15,000
Soap	shs.	800
Matooke	+ Shs	<u>3500</u>
Total Expenditure sh.		<u><u>19,300</u></u>

3. Paul is 15 years old. Sam is 5 years older than Paul. How old is Sam?

ACTIVITY: Exercise 3c (MK Primary mathematics book 4 (New Edition) pg. 34-36)
Understanding MTC bk 4 pg 31

LESSON 28**SUB TOPIC: SUBTRACTION****Examples 1:**

1. $246 - 192$

H	T	O
2	4	6
- 1	9	2
<hr/>		
0	5	4
<hr/>		

- Arrange numbers vertically by their place values.
- Subtract impossible numbers by borrowing.

Example 2.

2. $530 - 254$

H	T	O
5	3	0
- 2	5	4
<hr/>		
2	7	6
<hr/>		

- Arrange numbers vertically in their place values.
- Subtract by regrouping using tens

ACTIVITY: Exercise 3d (MK primary book four page 38-41 (New Edition))
Understanding MTC bk 4 pg 35

LESSON: 29**SUB TOPIC: SUBTRACTION OF LARGER NUMBERS****Example:**

(i) 10246 - 3118

	TTH	TH	H	T	O
	1	0	2	4	6
-	3	1	1	8	
		<u>7</u>	<u>1</u>	<u>2</u>	<u>8</u>

(ii) 24035 - 3727

	TTH	TH	H	T	O
	2	4	0	3	5
-	3	7	2	7	
		<u>2</u>	<u>0</u>	<u>3</u>	<u>8</u>

ACTIVITY:

Exercise 3e (MK Primary book four page 44 (New Edition))

Understating MTC bk 5 pg 38

REMARKS:**LESSON: 30****SUB TOPIC: WORD PROBLEM INVOLVING SUBTRACTION****Example:**

What is the difference between 243 and 37?

$$\begin{array}{r} 243 \\ - 37 \\ \hline 206 \end{array}$$

(ii) Katabula had shs. 2500. He bought a book for 350. What was his change?

Katabula had - 2500

He paid - 350His change - 2150

(iii) By how much is 236 greater than 182?

(iv) Nassim is 13 years old. Alex is 3 years younger than her.

a) How old is Alex?

ACTIVITY: Exercise 3f (MK primary mathematics book four page 45 (Old edition))**REMARKS**

TOPIC: OPERATION ON WHOLE NUMBERS
SUBTOPIC: MULTIPLYING BY 110 AND 100
CONTENT: MULTIPLYING BY ZERO, TEN AND HUNDRED

Examples

Workout

- a) $12 \times 10 =$ (b) 45×0 (3) $0 \times 3 \times 2 \times 0$
 d) 47×100 (e) 984×100 (f) 86×100

Activity

New MK pupils' bk 4 pg 42-44

LESSON: 31

TOPIC: OPERATION ON WHOLE NUMBERS
SUB TOPIC MULTIPLICATION OF 3 DIGIT NUMBERS BY NUMBER 1-10

Other words that call for multiplication are: product, times.

CONTENT: Multiplying by one digit

Example 1:

- (i)
$$\begin{array}{r} 4\ 3\ 4\ 6 \\ \times \quad 3 \\ \hline 13\ 0\ 3\ 8 \end{array}$$
 (ii)
$$\begin{array}{r} 1\ 0 \\ \times \quad 2 \\ \hline 2\ 0 \end{array}$$
 (iii)
$$\begin{array}{r} 4\ 3 \\ \times \quad 4 \\ \hline 172 \end{array}$$

 (iv)
$$\begin{array}{r} 1\ 4 \\ \times \quad 8 \\ \hline 112 \end{array}$$

ACTIVITY: New Edition MK Primary Mathematics bk 4 page 46-47

LESSON: 32

Word problems involving multiplication by one digit.

Example:

1. Juma is paid shs. 6960 a day. How much will he get if he works for 7 days.

Solution:

1 day he gets shs. 6960

7 days he gets 6 9 6 0

$$\begin{array}{r} \\ \times \quad 7 \\ \hline \text{Shs. } 4\ 8\ 7\ 2\ 0 \end{array}$$

\therefore He gets 48,720 in 7 days.

Apply lattice method on two digit numerals.

2. Juma is 10 years old. Steven is twice as old as Juma. How old is Steven?

ACTIVITY: Exercise 3g No. 1 – 3 page 46 and 3h 1 – 5 page 47 (MK New Edition)

LESSON: 33**Multiplication as repeated addition****CONTENT:**

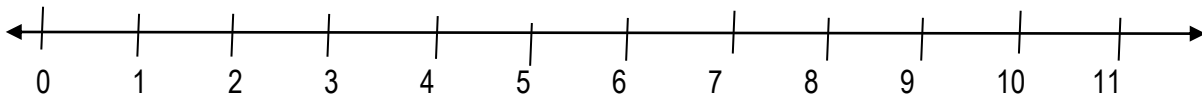
Example:

(a) $4 \times 2 = 2 + 2 + 2 + 2$

$$= \underline{\underline{8}}$$

(b) $3 + 3 + 3 + 3 = 4 \times 3$

$$= \underline{\underline{12}}$$

(c) Show 3×2 on a number line below**ACTIVITY:**

Use repeated addition to multiply the following:-

(i) 3×2

Complete

(ii) 6×4

a) $2 + 2 + 2 + 2 = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$

(iii) 4×3

b) $4 + 4 + 4 + 4 + 4 = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$

(iv) 5×3

c) $3 + 3 + 3 + 3 + 3 = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$

(v) 8×2

d) $8 + 8 = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$

e) $9 + 9 + 9 = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$

REMARKS

LESSON 34**SUB TOPIC : DIVISION****CONTENT : DIVISION AS REPEATED SUBTRACTION**

Example

$$\begin{array}{lcl}
 1. & 12 \div 3 = 12 - 3 = 9 & \\
 & 9 - 3 = 6 & \\
 & 6 - 3 = 3 & \\
 & 3 - 3 = 0 &
 \end{array}
 \left. \vphantom{\begin{array}{l} 12 \\ 9 \\ 6 \\ 3 \end{array}} \right\} \begin{array}{l} \text{count the number of times you subtract 3 division from the} \\ \text{dividend until you get "o" is the answer} \\ \therefore 12 \div 3 = 4 \text{ times} \end{array}$$

ACTIVITY :Exercise 3I page 53 (MK New Edition)

LESSON 35**TOPIC : OPERATION ON NUMBERS****SUB TOPIC : DIVISION WITHOUT REMAINDER****CONTENT:**

Example 1: Divide 4804 by 4.

$$\begin{array}{r}
 1201 \\
 4 \overline{) 4804} \\
 \underline{08} \\
 2 \times 4 = 08 \\
 \underline{08} \\
 00 \\
 00 \\
 \underline{04} \\
 1 \times 4 = 04 \\
 \underline{04} \\
 00
 \end{array}$$

1 x 4 = 4

Example 2: 124 ÷ 4

$$\begin{array}{r}
 31 \\
 4 \overline{) 124} \\
 \underline{12} \\
 04 \\
 1 \times 4 = 04 \\
 \underline{04} \\
 00
 \end{array}$$

3 x 4 = 12

1 x 4 = 4

ACTIVITY: Exercise 3m page 53 (Mk New Edition).

Exercise 3:16 understanding MTcbkpg 48

LESSON: 36**SUBTOPIC : WORD PROBLEMS INVOLVING DIVISION WITHOUT REMAINDERS****CONTENT : Examples**

1. There are 120 oranges in 2 bags. How many oranges are in each bag?

Divide

Example 1:

$$\begin{array}{r}
 060 \\
 2 \overline{) 120} \\
 \underline{12} \\
 00 \\
 0 \times 2 = 00 \\
 \underline{00} \\
 00
 \end{array}$$

0 x 2 = 0

6 x 2 = 12

0 x 2 = 0

Each bag has 60 oranges

Example 2

Divide 246 text books among 3 classes

$$\begin{array}{r}
 082 \\
 3 \overline{) 246} \\
 \underline{00} \\
 24 \\
 8 \times 3 = 24 \\
 \underline{24} \\
 06 \\
 2 \times 3 = 06 \\
 \underline{06} \\
 00
 \end{array}$$

0 x 3 = 0

8 x 3 = 24

2 x 3 = 6

Each gets 82 books.

ACTIVITY: Exercise 3p (New Edition) MK Primary Mathematics book 4 page 55**LESSON 38****SUB TOPIC : DIVISION WITH REMAINDERS****CONTENT:** Examples

Example : Divide 38148 by 5.

$$\begin{array}{r}
 07629 \\
 5 \overline{) 38148} \\
 \underline{38} \\
 2 \times 4 = 08 \\
 \underline{38} \\
 7 \times 5 = 35 \\
 \underline{31} \\
 6 \times 5 = 30 \\
 \underline{14} \\
 2 \times 5 = 10 \\
 \underline{48} \\
 9 \times 5 = 45 \\
 \underline{48} \\
 3
 \end{array}$$

$$\therefore 38148 \div 5 = 7629 \text{ rem } 3$$

LESSON :36

SUB-TOPIC : DIVISION BY 10

Example:

(i) $650 \div 10$

$$= \frac{650}{10}$$

$$\therefore 650 \div 10 = 65.$$

(ii) $420 \div 10$

$$= \frac{420}{10}$$

$$\therefore 420 \div 10 = 42.$$

2. Joan distributed 320 text books amongst 20 pupils. How many text book did each get?

ACTIVITY :

(i) $200 \div 10 =$

(v) $640 \div 10 =$

(ii) $370 \div 10 =$

(vi) $280 \div 10 =$

(iii) $810 \div 10 =$

(vii) $480 \div 10 =$

(iv) $340 \div 10 =$

(viii) $560 \div 10 =$

LESSON 39

SUB-TOPIC : AVERAGE

Finding average or mean of numbers

Examples

(i) Find the average of 0, 2 and 4

$$\text{Average} = \frac{\text{Total}}{\text{Number of items}} = \frac{0 + 2 + 4}{3} = \frac{6}{3} = 2$$

ACTIVITY:

Divide the following:-

1. 1516 by 5 =

2. 2425 by 3 =

3. 1212 by 5 =

4. 135 by 2 =

5. 215 by 4 =

6. 1212 by 7 =

- (ii) Find the average age of three girls one of 8 years, another of 10 years and the third girl of 9 years.

Total age = 8 years + 9 years = 27 years.

$$\begin{aligned} \text{Average} &= \frac{\text{Total age}}{\text{No. of children}} = \frac{(8 + 9 + 10) \text{ years}}{3} \\ &= \frac{27 \text{ years}}{3} = 9 \text{ years} \end{aligned}$$

ACTIVITY:

A new MK primary mathematics book 5 page 76 – 77

LESSON 39

TOPIC : PATTERNS AND SEQUENCES

SUB-TOPIC : TYPES OF NUMBERS

CONTENT : Even and odd numbers

Even numbers if divided by two give us 0 (zero) as a remainder.

Examples: 0, 2, 4, 6, 8

Note: Any number ending with 0, 2, 4, 6, 8 is an even number.

Exactly divisible by 2

Odd numbers are numbers if divided by two leave us with 1 as a remainder.

Example 1, 3, 5, 7, 9

Note: All numbers that have their last digit as 1, 3, 5, 7, 9 are odd numbers.

Not exactly divisible by 2

ACTIVITY: New MK Primary Mathematics book four page 59.

LESSON 40

SUB TOPIC: More about Even and odd numbers.

- Counting even and odd numbers in a given set of instruction.

Examples:

- (i) How many even numbers are there between 10 and 20?

Even numbers between 10 and 20 = { 12, 14, 16, 18 }

∴ Even numbers between 10 and 20 are 4.

- (ii) How many odd numbers are there between 0 - 10

= { 1, 3, 5, 7, 9 }

There are 5 odd numbers.

ACTIVITY: Exercise 4c and 4d page 60 New MK Primary Mathematics book 4.

LESSON 41**SUBTOPIC : More about even numbers.****Finding the sum, difference and product of even numbers.****Examples:**

1. What is the sum of the first 4 even numbers.

First 4 even numbers { 0, 2, 4, 6 }

$$\text{Sum} = 0 + 2 + 4 + 6$$

$$\underline{\underline{\text{Sum} = 12}}$$

2. What is the difference between the second and fourth even numbers?

= { 0, 2nd, 4, 6th }

$$\text{Difference} = 6 - 2$$

$$\underline{\underline{\text{Difference} = 4}}$$

3. What is the product of the first and fifth even numbers?

^{1st}
{ 0, 2, 4, 6, ^{5st} 8 }

$$\text{Product} = 0 \times 8 = 0$$

4. List the even numbers between 20 and 40

ACTIVITY: Mk Primary Mathematics book 4 page 60 Exercise 4c

LESSON 42**SUBTOPIC: More about odd numbers.****Finding the sum, difference and product of odd numbers****Examples:**

- (i) List down all odd numbers less than 10.

{ 1, 3, 7 }

- (ii) What is the sum of odd numbers less than 8

{ 1, 3, 7 }

$$= 1 + 3 + 7$$

$$\underline{\underline{7}}$$

- (iii) What is the product of the 3rd and 4th odd number?

Odd numbers = { 1, 3, ^{3rd} 5, ^{4th} 7, 9, 11, 13, 15 }

$$\text{Product} = 5 \times 7$$

$$= \underline{\underline{35}}$$

ACTIVITY: Exercise 4d. MK primary mathematics book 4 New edition

LESSON 43**SUBTOPIC: Counting and whole numbers**

Definition: Counting numbers are numbers we use to count. They begin with one.

Counting numbers are also called Natural numbers

Examples: counting numbers are infinite/endless

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

Whole numbers

Write the missing numbers

0, 1, 2, 3, 4, 5, ____, ____, ____

These are whole numbers. They begin with Zero to infinity

= 0, 1, 2, 3, 4, 5, 6, 7, 8, 9

ACTIVITY: Exercise 4e New MK Primary Mathematics book four page 62

LESSON 44**TOPIC: PATTERNS AND SEQUENCE****SUBTOPIC: Number sequence by Adding.****CONTENT: Example**

(a) (1, 3, 5, 7, 9, ____, ____)

Keep adding 2

$$1 + 2 = 3$$

$$3 + 2 = 5$$

$$5 + 2 = 7$$

$$7 + 2 = 9$$

$$9 + 2 = \boxed{11}$$

$$11 + 2 = \boxed{13}$$

(b) (1, 2, 4, 5, 7, 8, ____)

Add 1 then add 2

Begin with

$$1 + 1 = 2$$

$$2 + 2 = 4$$

$$4 + 1 = 5$$

$$5 + 2 = 7$$

$$7 + 1 = 8$$

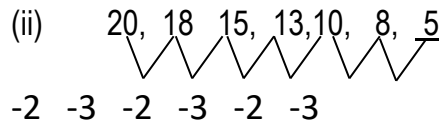
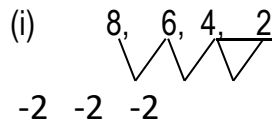
$$8 + 2 = \boxed{10}$$

The missing number is 10

The missing numbers are 11 and 13

NOTE: Every sequence has its own pattern

ACTIVITY: 4F page 63 Mk Primary Mathematics book four (New Edition).

LESSON 45**SUB TOPIC: NUMBER SEQUENCE****CONTENT:** Number sequence by subtracting**Examples:****ACTIVITY:** Exercise 4e New MK Primary Mathematics book four page 62**LESSON 46****SUB TOPIC: MULTIPLES**

A multiple is a product of a given number and another whole greater than zero e.g.

 $4 \times 2 = 8$, and 8 is a multiple of 4.

(i) List multiples of 4

$1 \times 4 = 4$

$2 \times 4 = 8$

$3 \times 4 = 12$

$4 \times 4 = 16$

$5 \times 4 = 20$

$6 \times 4 = 24$

{4, 8, 12, 20, 24,}

(ii) List multiples of 5

$1 \times 5 = 5$

$2 \times 5 = 10$

$3 \times 5 = 15$

$4 \times 5 = 20$

$5 \times 5 = 25$

$6 \times 5 = 30$

{5, 10, 15, 20, 25, 30,}

Emphasize mastering the multiplication table through using all operations; addition, subtraction, multiplication and division

ACTIVITY: Exercise 4g page 64 Mk book four New Edition.**LESSON 47****SUB TOPIC: COMMON MULTIPLES AND LCM****CONTENT**

Examples

1. Find the first common multiples of 2 and 4

$M_2 = \{2, 4, 6, 8, 10, 12, 14, 16, 18, \dots\}$

$M_4 = \{4, 8, 12, 16, 20, 24, \dots\}$

Common multiples = { 4, 8, 12, 16 }

2. Find the L.C.M of 4 and 5

$$M_4 = \{4, 8, 12, 16, 20, \boxed{24}, 28\}$$

$$M_5 = \{5, 10, 15, 20, \boxed{25}, 30, \dots\}$$

Common multiples = $\{20\}$

\therefore L.C.M is 20

ACTIVITY: Exercise 4L MK New Edition book 4 page 67.

LESSON 48

SUB TOPIC: Counting in tens, hundreds and thousands.

Examples:

(i) Fill in the missing number 10, 20, 30, ____, ____, ____ 70

Add 10 to get the next number

$$30 + 10 = 40$$

$$40 + 10 = 50$$

$$50 + 10 = 60$$

10, 20, 30, 40, 50, 60 70

(ii) Fill in the missing numbers 100, 200, 300, ____, ____, ____ 700

Add 100 to get the next number.

$$100 + 100 = 200$$

$$200 + 100 = 300$$

$$300 + 100 = 400$$

$$400 + 100 = 500$$

$$500 + 100 = 600$$

$$600 + 100 = 700$$

100, 200, 300, 400, 500, 600, 700

ACTIVITY: Exercise 4m Pg. 68 New Edition MK primary Mathematics bk four.

LESSON 49**SUBTOPIC:** Multiplying by 10, 100, 1000.**CONTENT:** In this case, we simply add the number of zero to the number.Examples:

(i) $6 \times 10 = 60$

(ii) $7 \times 100 = 700$

(iii) $8 \times 1000 = 8000$

(iv) $38 \times 100 = 3800$

ACTIVITY: Exercise 4n on page 69 New Edition MK primary Mathematics book four.**LESSON 50****SUBTOPIC:** Multiplying by multiples of 10**CONTENT:**

Example 1.

(i) What is 7×30 ?

$7 \times 30 = ?$

$30 = 3 \times 10$

So $7 \times 30 = 7 \times 3 \times 10$

$= 21 \times 10$

$= \underline{\underline{210}}$

Example (ii)

What is 50×30 ?

$50 \times 30 = 5 \times 10 \times 3 \times 10$

$= 5 \times 3 \times 10 \times 10$

$= 15 \times 100$

$= \underline{\underline{1500}}$

ACTIVITY: Exercise 4(o) page 70 New MK book 4**LESSON 52****SUB-TOPIC : MAGIC SQUARES**

7	a	5
b	4	c
3	d	1

Magic sum = $7 + 4 + 1 = 12$ Find a. = _____

b. = _____

c. = _____

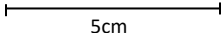
d. = _____

 Teach children
how to form their
own magic tables

SCHEME OF WORK FOR P.4 MATHEATICS TERM II 2020

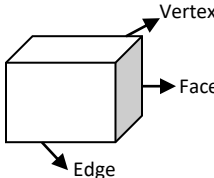
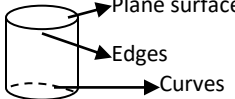
WK	PD	THEME	SUB THEME	CONTENT	SUBJECT COMPETECIES	LANGUAGE COMPETENCIES	METHODS	LIFE SKILL	T/L AIDS	T/L ACTS	REF
		F R A C T I O N S	Revision	Fractions (Lower work) <ul style="list-style-type: none"> • Definition. • Shading / Naming fractions. • Writing fractions in words and figures. • Types of fractions. 	<ul style="list-style-type: none"> ▪ Defines fractions. ▪ Shades the given fractions ▪ Gives examples of fractions. 	<ul style="list-style-type: none"> ▪ Defines fractions. ▪ Names the types of fractions. 	<ul style="list-style-type: none"> ▪ Explanation ▪ Demonstration. ▪ Guided discovery 	<ul style="list-style-type: none"> ▪ Effective communication. ▪ Creativity. 	<ul style="list-style-type: none"> ▪ Real objects e.g. oranges, apples papers. 	Collecting objects. Shading Naming.	MK Bk.3 pg. 94 – 98. A new MK Bk 4 pg. 80 - 86
			Fractions	<ul style="list-style-type: none"> • Equivalent fractions. • How to get equivalent. • Finding missing parts of fractions. • Reduce fractions of atleast one factor • Comparing Fractions. • Ordering simple fractions. 	<ul style="list-style-type: none"> • Multiples and dives. • Compares fractions. • Reduces fractions to lowest term. • Identifying simple equivalent fractions using diagrams 	<ul style="list-style-type: none"> • Describes and names equivalent fractions. • Writes equivalent fractions. 	<ul style="list-style-type: none"> • Group discussion. • Question and answer. 	<ul style="list-style-type: none"> ▪ Problem solving. ▪ Effective communication. ▪ Critical thinking. 	<ul style="list-style-type: none"> ▪ Flash cards. ▪ Charts showing fractions 	Cutting Shading	MK primar y MTC bk 4 pg 82 - 86
			Operations on fractions	Addition of fractions <ul style="list-style-type: none"> • With same denominators. • With different denominators. Subtraction of fractions <ul style="list-style-type: none"> • With same denominators. • With different 	<ul style="list-style-type: none"> ▪ Adds fractions with same and different denominators. ▪ Subtracts fractions with same and different denominators. 	<ul style="list-style-type: none"> ▪ Reads fractions given 	<ul style="list-style-type: none"> ▪ Demonstrati on. ▪ Illustration. ▪ Group discussion. 	<ul style="list-style-type: none"> ▪ Effective communicati on. ▪ Critical thinking ▪ Creativity. 	<ul style="list-style-type: none"> ▪ Pupils chart showing fractions . 	<ul style="list-style-type: none"> ▪ Cutting. ▪ Grouping ▪ Reading 	New MK Bk 4 Pg. 87-97.

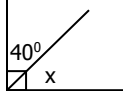
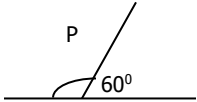
		F R A C T I O N S		denominators.							
				<p><u>Writing mixed as proper fraction</u></p> <ul style="list-style-type: none">▪ Changing improper fractions to mixed numbers. <p><u>Addition of mixed numbers</u></p> <ul style="list-style-type: none">▪ With same denominators only <p><u>Subtraction of mixed numbers.</u></p> <ul style="list-style-type: none">▪ With same denominators only <p><u>Fractions of a group</u></p> <ul style="list-style-type: none">▪ What is ½ of 6?▪ Find the remaining fractions.▪ Multiplication of fractions.	<ul style="list-style-type: none">▪ Changes mixed numbers to improper fractions.▪ Adds and subtracts mixed fractions.▪ Uses fractions of a group to apply in given numbers.	<ul style="list-style-type: none">▪ Reads fractions.▪ Defines the type of fractions.	<ul style="list-style-type: none">▪ Demonstration on.▪ Guided discovery.▪ Explanation.	<ul style="list-style-type: none">▪ Creativity.▪ Logical reasoning.	<ul style="list-style-type: none">▪ Real objects like text books.	<ul style="list-style-type: none">▪ Cutting▪ Grouping▪ Reading	New MK Bk. 4 Pg. 87 - 97
2	1		Decimals	<p>Decimal fractions</p> <ul style="list-style-type: none">▪ Writing decimals -in words -in figures upto tenths▪ Expressing fractions as decimals upto tenths▪ Expressing decimals as fractions up to tenths▪ Place values of decimals upto tenths	<ul style="list-style-type: none">▪ Write decimals in words and figures upto tenths.▪ Express decimals as common fractions up to tenths.▪ Add decimal using a number line.▪ Order fractions from big to small and vice versa.▪ Subtract	<ul style="list-style-type: none">▪ Uses the word decimals in problems "point"	<ul style="list-style-type: none">▪ Guided discovery.▪ Think pair share.▪ Demonstration.▪ Illustration .	<ul style="list-style-type: none">▪ Effective communication.▪ Creative thinking.▪ Problem solving.	<ul style="list-style-type: none">▪ Abacus.▪ Flash cards.	<ul style="list-style-type: none">▪ Collecting objects like bottle tops.▪ Cutting.	New MK primary MTC book 4 pages 98 - 111

				<ul style="list-style-type: none"> Tenths Addition on decimals 	decimal fractions upto tenths.						
				Ordering decimals.	<ul style="list-style-type: none"> Interpret word problems. 						
		2-DIMENSIONAL GEOMETRY	Identifying 2 – dimensional figures	Plane shapes Examples: <ul style="list-style-type: none"> Rectangles. Circle Rhombus Oval Square Kite Trapezium Triangle Parallelogram Rhombus 	1. Identifies plane shapes. 2. Draws given shapes. 3. Writes the properties of shapes.	<ul style="list-style-type: none"> Describes and names shapes of 2 – dimensional figures. States the properties of the shapes. 	<ul style="list-style-type: none"> Demonstration. Explanation Discussion. 	<ul style="list-style-type: none"> Effective communication. Logical reasoning. Creativity 	<ul style="list-style-type: none"> Objects with such shapes e.g. balls, baskets, cups, eggs etc. 	<ul style="list-style-type: none"> Identifying Drawing shaping 	New MK Bk. 4 pg. 125. MK pupils Bk. 3 pg. 126
			Drawing line segments	Drawing and measuring line segments. Example. <div style="text-align: center;"> End point End point  </div>	<ul style="list-style-type: none"> Draws line segments. Measures line segments 	<ul style="list-style-type: none"> Uses the word “segment” Make correct sentences 	<ul style="list-style-type: none"> Illustration. Demonstration. Explanation 	<ul style="list-style-type: none"> Logical reasoning. Creativity. Effective communication. 	<ul style="list-style-type: none"> Dividers. Pencil. Rules etc 	<ul style="list-style-type: none"> Drawing Measuring 	A new MK Bk. 4 Pg. 142.
			Drawing and measuring angles	<ul style="list-style-type: none"> Drawing angles using a protractor. Measuring \angles using a protractor e.g. 50°, 30°, 60°, 90° not exceeding 90° 	<ul style="list-style-type: none"> Draws angles using a protractor. Measuring angles using a protractor. 	<ul style="list-style-type: none"> Uses the word “Protractor” “Angles” etc 	<ul style="list-style-type: none"> Demonstration. Guided discovery. Explanation Illustration 	<ul style="list-style-type: none"> Effective communication. Logical reasoning. Accuracy. 	<ul style="list-style-type: none"> Rulers. Protractor Dividers. 	<ul style="list-style-type: none"> Drawing. Measuring. 	New MK Bk. 4 Pg. 143.

3	1		Constructing squares, rectangle and equilateral triangles	<ol style="list-style-type: none"> Constructing squares Rectangles using a protractor when given sides. 	<ul style="list-style-type: none"> Constructs squares, rectangles, using a protractor. 	<ul style="list-style-type: none"> Describes and names the instruments for construction 	<ul style="list-style-type: none"> Demonstration. Explanation 	<ul style="list-style-type: none"> Effective communication. Critical thinking. Logical reasoning. 	<ul style="list-style-type: none"> Protractors Dividers Rulers Pencils Pair of compass 	<ul style="list-style-type: none"> Drawing Constructing. Measuring. 	
		2-DIMENSIONAL GEOMET		<ol style="list-style-type: none"> Constructing equilateral triangles when given sides using a pair of compasses only. 	<ul style="list-style-type: none"> Constructs equilateral triangles using a pair of compasses only when given sides. 	Identifies and names the instruments used for construction	Demonstration Explanation	Critical thinking Logical reasoning	Protractor Dividers Ruler Pencil Pair of compasses	Drawing Constructing Measuring	
			Right angles	<ul style="list-style-type: none"> Drawing and recognising right angles. 	<ul style="list-style-type: none"> Recognizes right angles. Draws right angles using a protractor only. 	<ul style="list-style-type: none"> Points out and names right angles in the class room and in the play ground. 	<ul style="list-style-type: none"> Explanation Illustration. Guided discovery. 	<ul style="list-style-type: none"> Logical reasoning. Creative thinking. Effective communication. 	<ul style="list-style-type: none"> Protractors Dividers. Rulers Pair of compasses 	-Drawing. -Identifying -Constructing. -Measure.	New MK pupils bk 4 Pg. 144.
			Perimeter	<ol style="list-style-type: none"> Finding perimeter when given sides e.g <ul style="list-style-type: none"> Squares Rectangles Triangles. 	<ul style="list-style-type: none"> Finds perimeter of squares, rectangles and triangles when given sides. 	<ul style="list-style-type: none"> Explains the meaning of perimeter. Illustrates perimeter of figures in exercise books. 	<ul style="list-style-type: none"> Illustration. Demonstration Explanation. 	<ul style="list-style-type: none"> Critical thinking. Effective communication. Logical thinking. 	<ul style="list-style-type: none"> Cuts of squares, rectangles and triangle. 	<ul style="list-style-type: none"> Drawing shapes. Finding missing side. 	New MK Bk 4 Pg. 204

	4	R Y	Area	<ul style="list-style-type: none"> Finding area of square Finding area of a rectangle 	<ul style="list-style-type: none"> Finds area by both counting and using formula 	<ul style="list-style-type: none"> Explains the meaning of area. Finds the area. 	<ul style="list-style-type: none"> Explanation Demonstration. Guided discovery. 	<ul style="list-style-type: none"> Critical thinking. Problem solving. Effective communication. 	<ul style="list-style-type: none"> Cuts outs of shapes like squares, rectangles. 	Drawing shapes. Identifying sides. Finding area.	New MK Bk 4 Pg. 209
		2-D I M E N S I O N A L G E O	Circles	Making circles <ul style="list-style-type: none"> Using hard paper. Using strings. Using the big toe. Using a pair of compasses. 	<ul style="list-style-type: none"> Makes circles using hard papers and toes. Uses a pair of compasses to draw circles. 	<ul style="list-style-type: none"> Identifies names and uses both strings and hard papers to make circles. 	<ul style="list-style-type: none"> Demonstration. Explanation. Discussion 	<ul style="list-style-type: none"> Critical thinking. Problem solving. Creativity. 	<ul style="list-style-type: none"> Strings. Hard papers. 	Making and drawing circles.	New MK Bk. 4 Pg. 134.
			Parts of a circle	Naming parts of a circle. Example. <ul style="list-style-type: none"> Diameter Radius Chord Circumference 	1. Names the parts of a circle.	<ul style="list-style-type: none"> Identifies names and uses the words like radius Diameter 	<ul style="list-style-type: none"> Explanation. Illustration Demonstration Guided discovery. 	<ul style="list-style-type: none"> Logical reasoning. Creativity. Effective communication 	<ul style="list-style-type: none"> Cutouts. Chart showing parts of a circle. 	<ul style="list-style-type: none"> Identifying. Drawing Naming parts. 	New MK Bk 4 Pg. 135.
			Diameter and radius	1. Finding diameter when given radius. 2. Finding radius when given diameter.	<ul style="list-style-type: none"> Finds diameter. Measures diameter. Finds radius Measures radius. 	<ul style="list-style-type: none"> Explains and uses / relates polygons as used in our daily life. 	<ul style="list-style-type: none"> Explanation. Discussion. Question and answer. 	<ul style="list-style-type: none"> Logical reasoning. Critical thinking. Creativity. 	<ul style="list-style-type: none"> Real objects. Cut outs. Strings Rulers. 	<ul style="list-style-type: none"> Relating parts of a circle. Finding length of diameter and radius. 	Mk Bk. 4 Pg. 139-140

		M E T R Y	Polygons	<ul style="list-style-type: none">▪ Drawing and naming some polygons<ul style="list-style-type: none">▪ Triangles▪ Square▪ Rectangle▪ Pentagon – five sides.▪ Hexagon – Six sides.	<ul style="list-style-type: none">▪ Identify and names the polygons.	<ul style="list-style-type: none">▪ Explains and uses / relates polygons as used in our daily life.	<ul style="list-style-type: none">▪ Explanation.▪ Discussion.▪ Question and answer.	<ul style="list-style-type: none">▪ Logical reasoning.▪ Creativity.▪ Effective communication.	<ul style="list-style-type: none">▪ Cut outs.▪ Real objects etc.	- Identifying. -Naming reading	repertoire
		3 – D I M E N S I O N A L	3-dimensional geometry Identification.	Identifying and naming 3 – dimensional figures. Example <ul style="list-style-type: none">▪ Cone▪ Cylinder▪ Cube▪ Cuboid▪ Triangular pyramid etc.	<ul style="list-style-type: none">▪ Identifying 3 – dimensional figures.▪ Naming 3-dimensional figure.▪ Drawing 3 – dimensional figures.	<ul style="list-style-type: none">▪ Names and identifies common solids in English and mother tongues.	<ul style="list-style-type: none">▪ Explanation.▪ Illustration▪ Discovery.▪ Question and answer.	<ul style="list-style-type: none">▪ Creative thinking.▪ Logical reasoning.▪ Effective communication.	<ul style="list-style-type: none">▪ Models.▪ Cutouts.▪ Real objects of such shapes.	Drawing and naming.	New Mk Bk 4 Pg. 128.
		F I G U R E S / G E O	Naming parts of the solid shapes.	Parts of solid shapes. Example 1. Cube & cuboid  (a) 6 faces (b) 8 vertices (c) 12 edges 2. Cylinder  surface	<ul style="list-style-type: none">▪ Identifies and labels, faces, edges and vertices.▪ Counts the number of faces, edges and vertices.	<ul style="list-style-type: none">▪ Identifies names and uses words like; edges, vertices and faces in our daily life.	<ul style="list-style-type: none">▪ Explanation▪ Denomination▪ Illustration▪ Guided discovery	<ul style="list-style-type: none">▪ Critical thinking.▪ Effective communication▪ Creativity.	<ul style="list-style-type: none">▪ Models▪ Real objects▪ etc.	Drawing. Naming Identifying.	A New Mk Bk 4 Pg. 130.

		M E T R Y		(a) 1 curved surface (b) 2 plane surfaces (c) Area of parts of cube and cuboid (d) Volume of cubes and cuboid.							
		3 DIMEN SIONAL GEOME TRY	Angles	Types of angles 1. Right angles (Complementary angles of 2 angles only)  $X + 40^\circ = 90^\circ$ $X + 40^\circ - 40^\circ = 90^\circ - 40^\circ$ $X = 50^\circ$ 2. Straight angles (Supplementary angles of 2 angles only)  $P + 60^\circ = 180^\circ$ $P + 60^\circ - 60^\circ = 180^\circ - 60^\circ$ $P = 120^\circ$	1. Identify the different types of angles. 2. Find the complement and supplement of angles.	<ul style="list-style-type: none"> Explains the meaning of complement + and supplement angles. 	<ul style="list-style-type: none"> Explanation. Question and answer. Discussion Demonstration Illustration 	<ul style="list-style-type: none"> Problem solving. Logical reasoning. Effective communication 	<ul style="list-style-type: none"> Cut outs. Text books Illustration Chalkboard 	<ul style="list-style-type: none"> Identifying angles Finding missing numbers 	New MK primary MTC bk 4 pg.

		DATA HANDLING	Tallies	Interpretation and drawing of picto graphs, bar graphs and line graphs	<ul style="list-style-type: none"> ▪ Uses tally marks to collect and group data. ▪ Organizes data. ▪ Displays data. ▪ Interprets data. 	<ul style="list-style-type: none"> ▪ Counts objects / people. ▪ Records. ▪ Describes graphs. ▪ Explains graphs. 	<ul style="list-style-type: none"> ▪ Explanation. ▪ Question and answer. ▪ Illustration. ▪ Discussion. ▪ Demonstration. 	<ul style="list-style-type: none"> ▪ Effective communication. ▪ Logical thinking. ▪ Creative thinking. ▪ Problem solving. 	<ul style="list-style-type: none"> ▪ Real objects e.g. ▪ Straws ▪ Books. ▪ Pens ▪ Bottle tops. 	<ul style="list-style-type: none"> ▪ Counts tally marks. ▪ Growing using tallies. ▪ Drawing ▪ Reading ▪ Interpreting. ▪ Displaying ▪ Collecting ▪ Writing. 	New MK MTC Primary Bk 5 Pg. 115 – 123. Mk Old Edition P/S Bk 5 Pg.
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TOPICAL BREAKDOWN FOR P.4 MATHEMATICS TERM II 2020

THEME	TOPIC	SUB-TOPIC	DURATION	OUT COMES
NUMERACY	FRACTIONS	<ul style="list-style-type: none"> • Types of fraction • Naming parts of a mixed fraction • Conversion of mixed to improper and vice versa • Finding equivalent fractions • Reducing fractions • Comparing fractions • (\leq, \geq or $=$). • Operation on proper fraction • (Subtraction and addition only) • Operation on mixed fractions (addition and subtraction) • Word problem involving addition and subtraction of fraction. • Addition on different denominators • Subtraction of different denominators • Multiplication of fractions • Application of fractions • Decimal fractions. • From common to decimal and vice versa. • Place values of decimals • Addition on decimals • Subtraction on decimals • Arranging decimals 	2 weeks	The learner is able to solve problems involving fraction and relating them to real life situation
MEASURES	DIMENSIONAL GEOMETRY	<ul style="list-style-type: none"> • Identifying and naming two dimensional figures • Matching of pictures of figures to their names. • Drawing two dimensional figures (triangle, square, rectangle) • Drawing line and measuring line segments • Drawing and measuring angles. • Identifying right angles • Constructing 90° • Constructing a square • Constructing a rectangle • Constructing an equilateral triangle 	4 weeks	The learner is able to recognize and construct various geometric figures and relate them to other fields such as architectural drawings.
		<ul style="list-style-type: none"> • 3. Dimension • Naming solid shapes • Identifying properties of three dimensional figures (cube, cuboid, cylinder) • Marking and drawing 3 dimensional figures • Finding volume of a cube and cuboid. • Angles of a triangle • Right and straight angles. 		

Interpretation of graphs and data	Data handling	<ul style="list-style-type: none"> Counting and representing numbers using tally marks. Drawing picto graphs Interpreting picto graphs, Recording information using tally marks Reading, drawing and interpreting tables Drawing and interpreting bar and line graphs 	1 ½ weeks	The learner is able to interpret and draw and solve problems involving graphs
Measurements	Money	<ul style="list-style-type: none"> Recognition of notes Currency Addition of money Completing shopping bills tables Finding profits and losses Costs and prices 	1 ½ weeks	The learner is able to solve practical problems related to utilization of Uganda currency in everyday life.

HORMISDALLEN SCHOOL - KYEBANDO
LESSON NOTES FOR MATHEMATICS P.4 TERM II 2017

LESSON 1**TOPIC : FRACTIONS****SUBTOPIC : naming parts of fraction****CONTENT : Definition**

1. What is a fraction? A fraction is a part of a whole.

2. Parts of a fraction

Given $1\frac{2}{3}$

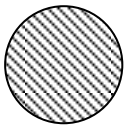
2 is the numerator

3 is the denominator

1 is the whole number

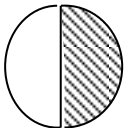
3. Names of fractions

Naming and shading fractions and writing in words.



1 a whole

Use real objects to teach parts of a whole (practical work)

 $\frac{1}{2}$ a half $\frac{2}{8}$ Two eights

4. Shade and unshaded fractions.

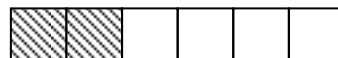
(a)

 $\frac{4}{6}$ 

(b)

 $\frac{1}{3}$

of 6

**ACTIVITY:** Exercise 5:1 pg 67, a new Mk bk 4

LESSON 2**TOPIC : FRACTIONS****SUBTOPIC : Finding equivalent fractions****CONTENT :** How to get equivalent fractions.

- We can use the knowledge of multiples.

Examples: $\frac{2}{3}$

$$\frac{2}{3} = \frac{2}{3} \times \frac{2}{2} = \frac{4}{6}, \quad \frac{2}{3} = \frac{2}{3} \times \frac{4}{4} = \frac{8}{12}$$

$$\frac{2}{3} = \frac{2}{3} \times \frac{3}{3} = \frac{6}{9}, \quad \therefore \frac{2}{3} = \left\{ \frac{2}{3} \times \frac{4}{6}, \frac{6}{9}, \frac{8}{12}, \frac{10}{15}, \dots \right\}$$

ACTIVITY: List the first three equivalent fractions for:

(a) $\frac{1}{3}$ (b) $\frac{2}{5}$ (c) $\frac{1}{2}$ (d) $\frac{1}{4}$ (e) $\frac{4}{7}$

LESSON 3**TOPIC : FRACTIONS****SUBTOPIC : Equivalent fractions****CONTENT :** Finding the missing part of a fraction

<p>Example: (a) $\frac{1}{2} = \frac{\boxed{}}{6}$</p> <p>$\therefore \frac{1}{2} = \frac{3}{6}$</p> <p>(b) $\frac{3}{5} = \frac{\boxed{}}{20}$</p> <p>$\therefore \frac{3}{5} = \frac{12}{20}$</p>	<p>$\frac{1}{2} \times \frac{2}{2} = \frac{2}{4}$</p> <p>$\frac{1}{2} \times \frac{3}{3} = \frac{3}{6}$</p> <p>$\frac{3}{5} \times \frac{2}{2} = \frac{6}{10}$</p> <p>$\frac{3}{5} \times \frac{3}{3} = \frac{9}{15}$</p> <p>$\frac{3}{5} \times \frac{4}{4} = \frac{12}{20}$</p>
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ACTIVITY: Exercise 5b MK bk 4 page 82

LESSON 4**TOPIC : FRACTIONS****SUBTOPIC : Reducing fractions****CONTENT : Reduce $\frac{6}{12}$ to its lowest term.**

Example:

$$(a) \quad \frac{6}{12} \div \frac{2}{2} = \frac{3}{6}$$

$$\frac{3}{6} \div \frac{3}{3} = \frac{1}{2}$$

$$\therefore \frac{6}{12} = \frac{1}{2}$$

(b) Write $\frac{3}{9}$ to its lowest terms (using H.C.F/G.C.F)

$$\frac{3}{9} \div \frac{3}{3} = \frac{1}{3}$$

$$F_3 = \{ 1, \textcircled{3} \}$$

$$F_9 = \{ 1, \textcircled{3}, 9 \}$$

$$\text{H.C.F} = 3$$

ACTIVITY: Exercise 5d MK bk 4 page 84**LESSON 5****TOPIC : FRACTIONS****SUBTOPIC : Comparing fractions without a number line****CONTENT :**

(a) **Example:** Which is greater $\frac{1}{3}$ or $\frac{1}{2}$?

$$\frac{1}{2} = \frac{2}{4}, \quad \frac{3}{6}, \quad \frac{4}{8} \dots\dots\dots$$

$$\frac{1}{3} = \frac{2}{6}, \quad \frac{3}{9}, \quad \frac{4}{12} \dots\dots\dots$$

$$\therefore \frac{1}{2} \text{ is greater than } \frac{1}{3}$$

Apply the symbols such as $>$, $<$ or $=$

ACTIVITY: Exercise 5f MK bk 4 page 86

LESSON 6**TOPIC : FRACTIONS****SUBTOPIC : Ordering fractions****CONTENT : Arranging fractions starting with the largest.****Example 1**

(i) $\frac{1}{2}, \frac{2}{3}, \frac{1}{6}$

$$\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8} = \frac{5}{10} \dots\dots\dots$$

$$\frac{2}{3} = \frac{4}{6} = \frac{6}{9} = \frac{8}{12} \dots\dots\dots$$

$$\frac{1}{6} = \frac{2}{12} = \frac{3}{18} \dots\dots\dots$$

$\therefore \frac{1}{2}, \frac{2}{3}, \frac{1}{6}$ starting from the biggest is $\frac{2}{3}, \frac{1}{2}, \frac{1}{6}$

Example 2

Arrange: $\frac{1}{3}, \frac{1}{2}, \frac{1}{5}$ starting with the smallest.

$$\frac{1}{3} = \frac{2}{6} = \frac{3}{9} = \frac{4}{12} = \frac{5}{15} = \frac{6}{18} = \frac{7}{21} = \frac{8}{24} = \frac{9}{27} = \frac{10}{30} \quad \text{○}$$

$$\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8} = \frac{5}{10} = \frac{6}{12} = \frac{7}{14} = \frac{10}{20} = \frac{13}{26} = \frac{15}{30}$$

$$\frac{1}{5} = \frac{2}{10} = \frac{3}{15} = \frac{4}{20} = \frac{5}{25} = \frac{6}{30} = \frac{7}{35}$$

$\therefore \frac{1}{3}, \frac{1}{2}, \frac{1}{5}$ from the smallest is $\frac{1}{5}, \frac{1}{3}, \frac{1}{2}$

ACTIVITY: Exercise 5f page 86.

LESSON 7**TOPIC : FRACTIONS****SUBTOPIC : Operation on fractions****CONTENT : Addition of fractions with the same denominators****Example: 1**

$$\frac{1}{5} + \frac{2}{5} = \frac{1+2}{5} = \frac{3}{5}$$

Example II

$$\frac{4}{12} + \frac{3}{12} = \frac{4+3}{12} = \frac{7}{12}$$

ACTIVITY: Exercise 5g page 87

LESSON 8

TOPIC : FRACTIONS

SUBTOPIC : Addition of fractions with the same denominator in word problem.

CONTENT : Jesca dug $\frac{1}{6}$ of the garden and Mary dug $\frac{4}{6}$ of the garden. What part of the garden was dug?

Jesca dug $\frac{1}{6}$

Mary dug $\frac{4}{6}$ so $\frac{1}{6} + \frac{4}{6} = \frac{1+4}{6} = \frac{5}{6}$

ACTIVITY: Exercise 5h page 88

LESSON 9

TOPIC : FRACTIONS

SUBTOPIC : Subtraction of fractions with the same denominators.

CONTENT : Example 1:

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

Example II

$$\frac{5}{7} - \frac{2}{7} = \frac{5-2}{7} = \frac{3}{7}$$

ACTIVITY: Exercise 51 page 89.

Introduce the use of LCM when adding and subtracting fractions with different denominators

LESSON 10

TOPIC : FRACTIONS

SUBTOPIC : Subtraction of fractions with the same denominators in word problem.

CONTENT : **Example 1:** Subtraction $\frac{2}{7}$ from $\frac{5}{7}$

$$\frac{5}{7} - \frac{2}{7} = \frac{5-2}{7} = \frac{3}{7}$$

Example 2

Andrew had $\frac{7}{9}$ of a cake, he ate $\frac{5}{9}$ of it. What fraction remained?

Andrew had $\frac{7}{9}$ he ate $\frac{5}{9}$

$$\therefore \frac{7}{9} - \frac{5}{9} = \frac{7-5}{9} = \frac{2}{9}$$

ACTIVITY: Exercise 51 page 89.

LESSON 11**TOPIC : FRACTIONS****SUBTOPIC : Addition of fractions with different denominators****CONTENT : Example 1**

Add: $\frac{1}{2} + \frac{1}{3}$

Using equivalent fractions

$$\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8} = \frac{5}{10} \dots\dots\dots$$

$$\frac{1}{3} = \frac{2}{6} = \frac{3}{9} = \frac{4}{12}$$

$$\frac{1}{3} + \frac{2}{6} = \frac{3+2}{6} = \frac{5}{6}$$

ACTIVITY: Exercise 5n page 94**LESSON 12****TOPIC : FRACTION****SUBTOPIC : Subtraction of fractions with different denominators.****CONTENT : Example 1**

Subtraction of $\frac{3}{4} - \frac{2}{3}$

Using equivalent fractions.

$$\frac{3}{4} = \frac{6}{8} = \frac{9}{12} = \frac{12}{16} = \frac{15}{20}, \dots\dots\dots$$

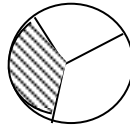
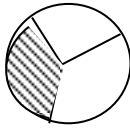
$$\frac{2}{3} = \frac{4}{6} = \frac{6}{9} = \frac{8}{12} = \frac{10}{15}$$

$$\frac{9}{12} - \frac{8}{12} = \frac{9-8}{12} = \frac{1}{12}$$

ACTIVITY: Exercise 50 page 95 old edited Mk bk 4**LESSON 13****TOPIC : FRACTIONS****SUBTOPIC : Mixed fractions as improper fractions****CONTENT : Example 1:**

$$1\frac{1}{2} = 1 + \frac{1}{2} = \frac{2}{2} + \frac{1}{2} = \frac{3}{2}$$

Example II



$$1\frac{1}{3} = 1 + \frac{1}{3} = \frac{3}{3} + \frac{1}{3} = \frac{4}{3}$$

ACTIVITY: Page 90 – 91 Exercise 5j

LESSON 14

TOPIC : FRACTIONS

SUBTOPIC : Changing improper fractions to mixed fractions.

CONTENT : Example 1: Change $\frac{5}{2}$ to a mixed fraction.

Working 1

$$\begin{aligned}\frac{5}{2} \text{ is } \frac{2}{2} + \frac{2}{2} + \frac{1}{2} \\ = 1 + 1 + \frac{1}{2} \\ = 2\frac{1}{2}\end{aligned}$$

Working 2

$$\begin{aligned}\frac{5}{2} &= 2\overline{)5} \\ &\quad \underline{-4} \\ &\quad 1\end{aligned}$$

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

ACTIVITY: Exercise 5k page 92

LESSON 15

TOPIC : FRACTIONS

SUBTOPIC : Addition of mixed fractions with the same denominators.

CONTENT(1) Add: $1\frac{1}{3} + 4\frac{1}{3}$ to a mixed fraction.

$$\begin{aligned}\text{Re-arrange: } &= (1 + \frac{1}{3}) + (4 + \frac{1}{3}) \\ &= 1 + 4 + \frac{1}{3} + \frac{1}{3} \\ &= 5 + \frac{2}{3} \\ &= 5\frac{2}{3}\end{aligned}$$

2) Workout

$$\begin{aligned}&= 2\frac{1}{4} + 1\frac{1}{4} = \frac{9}{4} + \frac{5}{4} \\ &\quad \frac{9+5}{4}\end{aligned}$$

$$\frac{14}{4}$$

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

ACTIVITY: Exercise 5L page 93.

LESSON 16**TOPIC :****FRACTIONS****SUBTOPIC :****Addition of mixed fractions with the same denominators in word problem.****CONTENT :**James bought $6\frac{1}{4}$ kg of meat on Monday and $7\frac{3}{4}$ kg on Tuesday.

How many kilograms did he buy altogether?

$$6\frac{1}{4}\text{ kg} + 7\frac{3}{4}\text{ kg}.$$

$$\text{Rearrange} = (6 + \frac{1}{4}) + (7 + \frac{3}{4})$$

$$6 + 7 + \frac{1}{4} + \frac{3}{4}$$

$$13 + \frac{4}{4}$$

$$13 + 1$$

$$= \underline{14\text{kg.}}$$

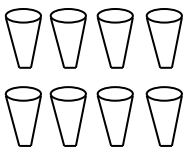
ACTIVITY: Exercise 5L page 93.**LESSON 17****TOPIC :****FRACTIONS****SUBTOPIC :****Subtraction of mixed fractions with the same denominators****CONTENT :**Subtract $4\frac{3}{5} - 2\frac{1}{5}$.

$$\text{Re-arrange} = (4 + \frac{3}{5}) - (2 + \frac{1}{5})$$

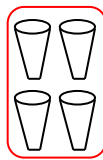
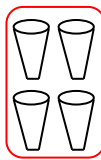
$$= (4 - 2) + (\frac{3}{5} - \frac{1}{5})$$

$$= 2 + \frac{2}{5}$$

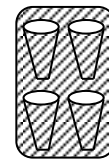
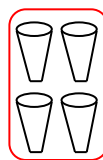
$$= 2\frac{2}{5}$$

ACTIVITY: Exercise 5m page 93 old edited MK bk 4**LESSON 18****TOPIC :****FRACTIONS****SUBTOPIC :****Fraction of a group.****CONTENT :**Example 1: What is $\frac{1}{2}$ of 8?

8 glasses



2 groups

 $\frac{1}{2}$ shaded $\frac{1}{2}$ of 8 = 4

ACTIVITY: Exercise 5q page 97.old edited MK bk 4

LESSON 19

TOPIC : **FRACTIONS**

SUBTOPIC : **Application of fractions**

CONTENT : A man had 100 cows on his farm. He gave away $\frac{2}{5}$ to his wife and remained with the rest. How many cows did he give his wife?

$$\frac{2}{5} \times 100 = 2 \times 20$$

$$= \underline{40 \text{ cows}}$$

Find the number of cows his remained with

$$100 - 40 = \underline{60 \text{ cows.}}$$

Find the fraction that he remained with;

$$1 - \frac{2}{5} = \frac{5}{5} - \frac{2}{5} = \frac{5-2}{5}$$

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

ACTIVITY : Exercise 5s page 138 book 5

LESSON 20

TOPIC : **FRACTIONS**

SUBTOPIC : **Multiplication of fractions**

CONTENT : **Multiply:** $\frac{1}{2} \times \frac{1}{4} = \frac{1}{8}$ (2) $\frac{3}{4} \times \frac{2}{3} = \frac{6}{12}$

$$\frac{1}{4} \text{ of } \frac{1}{3} = \frac{1}{4} \times \frac{1}{3} = \frac{1}{12}$$

$$\frac{1}{10} \times \frac{5}{8} = \frac{5}{80} = \frac{1}{16}$$

ACTIVITY : Exercise 5r page 137 - 138 book 5old edited MK bk 4

LESSON 21**TOPIC : FRACTIONS****SUBTOPIC : Writing fractions in decimal upto tenths****CONTENT :** Example 1

$$\frac{4}{10} = \begin{array}{c|c} \text{ones} & \text{Tenth} \\ \hline 0 & 4 \end{array} = 0.4$$

ii) $\frac{9}{10} = 0.9$

iii) $\frac{7}{10} = 0.7$

ACTIVITY: Exercise 5s page 99 Mk bk4 (old edited)

LESSON 23**TOPIC : FRACTIONS****SUBTOPIC : Expressing decimal as common fractions****CONTENT :** Examples:

(a) Change 0.3 into a common fraction.

$$0.3 = \frac{3}{10}$$

(b) $0.4 = \frac{4}{10}$

ACTIVITY : Exercise 5U page 100 MK Bk. 4

LESSON 23**TOPIC : FRACTIONS****SUBTOPIC : Place values of decimal upto tenths****CONTENT :** Examples

(a) What is the place value of 3 in 0.03

$$\begin{array}{c} 0.03 \\ \hline \text{Hundredths} \end{array}$$

ACTIVITY: MK pupils book 4 page 100. (old edition)

LESSON 24**TOPIC : FRACTIONS****SUBTOPIC : Writing decimal fractions in words.****CONTENT :** Example 1

Write 0.2 in words

0.2

└ Tenths

0.2 is either two tenths

Or zero point two

ACTIVITY: Exercise 5r page 99.

LESSON 25**TOPIC : FRACTIONS****SUBTOPIC : Addition of simple decimal fractions****CONTENT :** Examples: $2.3 + 3.8$ Example II: Add: $2 + 0.7$ 2.3 3.8 6.1

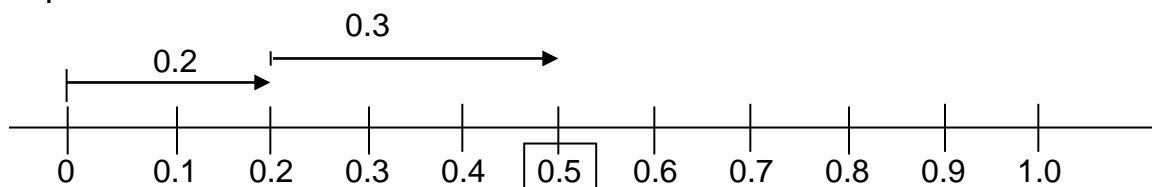
2

 $+ 0.7$ 2.7

ACTIVITY: MK Primary mathematics (New Edition) pg. 103 exercise 5y

LESSON 26**TOPIC : FRACTIONS****SUBTOPIC : Addition of decimal fractions using a number line.****CONTENT :** Add: $0.2 + 0.3$

Example:



ACTIVITY: Exercise: 5x page 102 MK Bk. 4 Page 102

LESSON 27**TOPIC : FRACTIONS****SUBTOPIC : Word problems involving addition of fractions (decimals)****CONTENT :** Examples:

- (i) I ate 0.2 of a cake in morning and 0.7 of it in the evening. What decimal fraction did I eat altogether?

Morning 0 . 2

Evening + 0 . 7

0 . 9 altogether.

ACTIVITY: Exercise 5z1 MK pupils Bk. 4 page 104

LESSON 28

TOPIC : FRACTIONS

SUBTOPIC : Subtraction of decimals.

CONTENT : Examples: Subtraction: $0.5 - 0.2$

0 . 5

- 0 . 2

0 . 3

ACTIVITY: Exercise 5z5 MK pupils Bk. 4 page. 108

LESSON 29

TOPIC : FRACTIONS

SUBTOPIC : Word problems involving subtraction of decimal

CONTENT :

Example:

Aisha had 7.2m of a string. She sold 3.5m. What length of the string did she remain?

Had 7 . 2m

Sold - 3 . 5m

= 3 . 7m

ACTIVITY: Exercise 5z9 MK pupils book 4 page 111

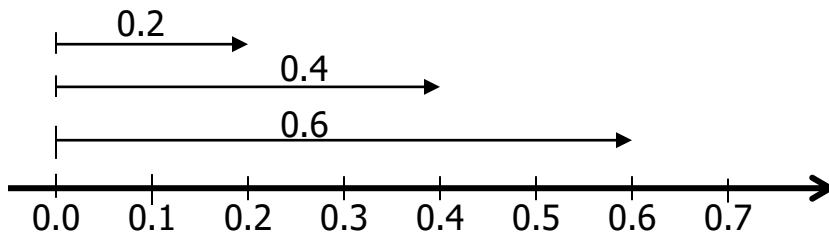
LESSON 30

TOPIC : FRACTIONS

SUBTOPIC : Ordering decimal fractions

CONTENT : Example 1.

Arrange 0.6, 0.2, 0.4 starting with the smallest



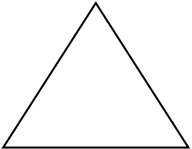
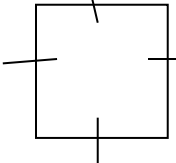
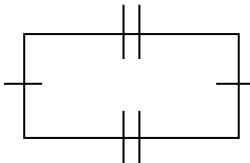
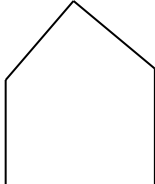
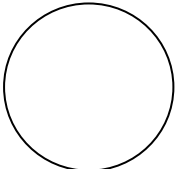
\therefore The order is 0.2, 0.4, 0.6

ACTIVITY: Exercise 5z3 Mk pupils BK. 4 Page. 107.

LESSON 31

THEME: GEOMETRY

SUBTOPIC : 2 Dimensional Geometry

Triangle	Square	Rectangle	Pentagon	Circle
				

Activity: 6:1 and 6:2 pg 90 – 91 A new Mk primary mathematics 2000 bk 4

NOTE: put emphasis on the use of well sharpened pencils and a ruler.

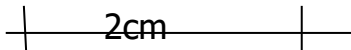
LESSON 32

TOPIC: GEOMETRY

SUB TOPIC: DRAWING LINES

1. Draw lines of the following lengths

a) 2cm



c) 4 cm

4cm

b) 7cm

7cm

Children should be able to interpret the scale on the ruler.

Activity: Teachers collection

©LESSON NOTES AND SCHEMES

Emphasize accuracy while measuring line and interpreting scales.

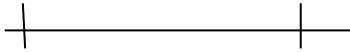
LESSON 33

TOPIC: GEOMETRY

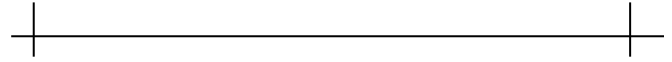
SUB TOPIC: measuring line segments

1. Use a ruler to measure the following line segments

a)



b)



LESSON 34

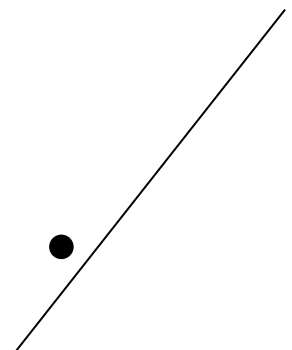
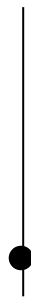
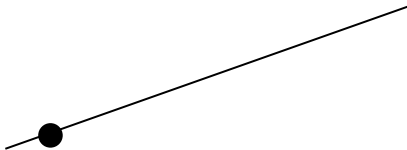
TOPIC: GEOMETRY

SUB TOPIC: identifying and drawing a right angle using a ruler and a set square

1. Find the right angles in the object found in the classroom and compound
2. Identify right angles from the drawn angles



Copy and draw a right angle at the given point

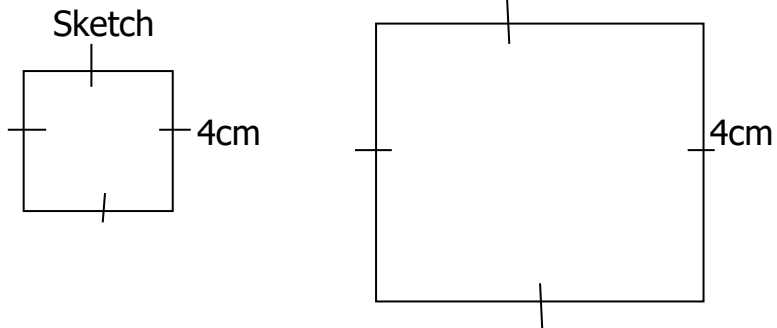


Activity :Pg 98 , A new Mk 20000 bk 4

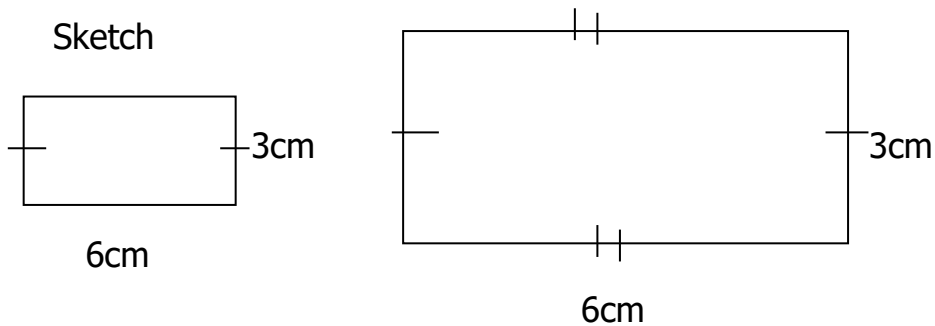
Note: Use the protractor

LESSON 35**TOPIC: GEOMETRY****SUB TOPIC: drawing a square and a rectangle using a set square and a ruler**

1. Use a set square and a ruler to draw a square whose sides are 4cm



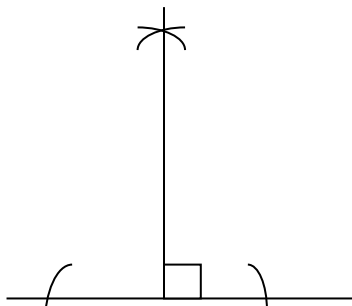
2. Draw a rectangle with length 6cm and width 3cm



Activity: Exercise pg93 , A new Mk 2000 bk 4

LESSON 36**TOPIC: GEOMETRY****SUB TOPIC: constructing a right angle**

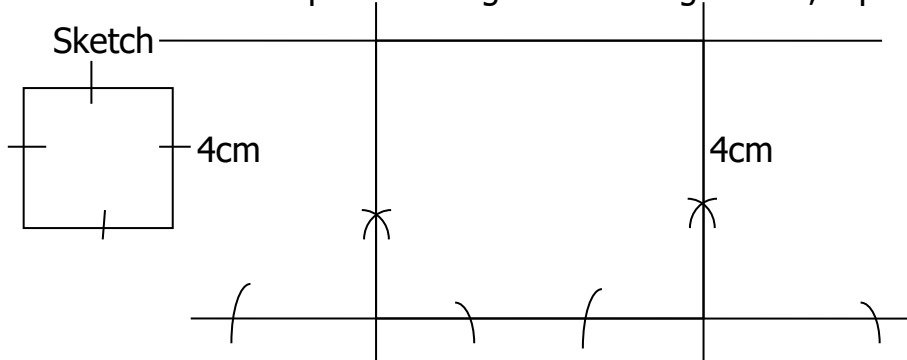
1. construct a right angle using a pair of compasses, a ruler and a pencil



Activity: pg 93 A new Mk 2000 bk 4

LESSON 37**TOPIC: 2 dimensional figures****SUB TOPIC: constructing a square**

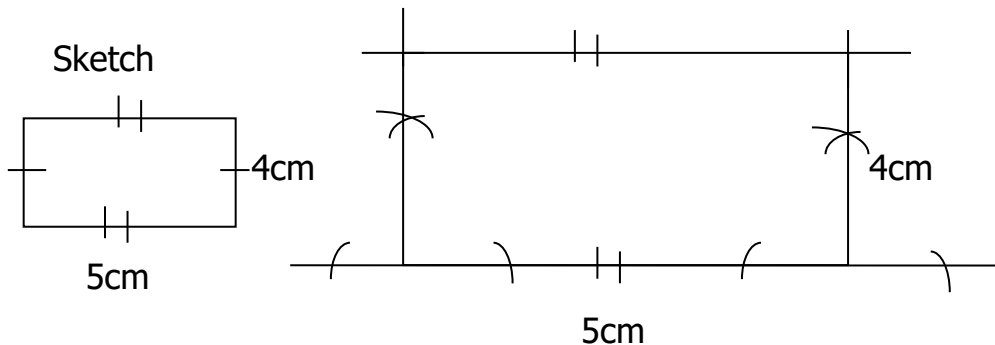
1. construct a square of length 4cm using a ruler, a pencil and a pair of compasses



Activity: pg 93 A new Mk 2000 bk 4

LESSON 38**TOPIC: 2 dimensional figures****SUB TOPIC: construction of a rectangle**

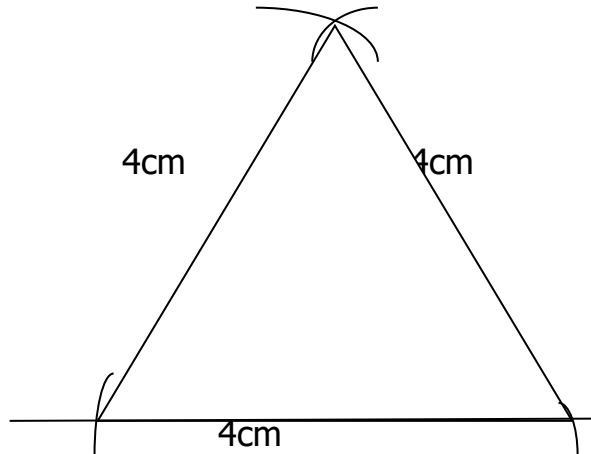
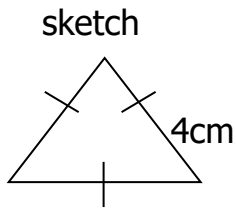
1. construct a rectangle of length 5cm and width 4cm using a ruler, a pencil and a pair of compasses



Activity pg 94 new Mk 2000 bk 4

LESSON 39**TOPIC: 2 dimensional figures****SUB TOPIC: construction of an equilateral triangle**

1. construct an equilateral triangle of sides 4cm



Activity: pg 95 new Mk 2000 bk 4

LESSON 40**TOPIC : 2 Dimensional figures****SUBTOPIC : Drawing and measuring angles using a protractor**

CONTENT : Using a ruler, pencil and a protractor, draw the following angles.

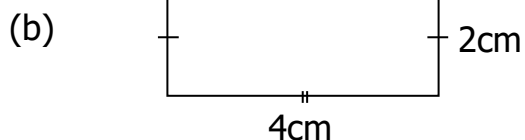
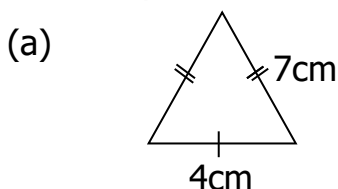
- (a) 90°
- (b) 45°
- (c) 60°
- (d) 30°

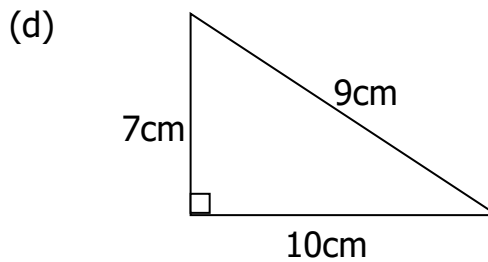
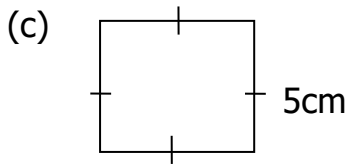
ACTIVITY: Using a protractor, measure the following angles.

- (a)
- (b)
- (c)

LESSON 41**TOPIC : 2 Dimensional figures****SUBTOPIC : finding perimeter of 2-dimensional shapes**

1. Find the perimeter of the following:-



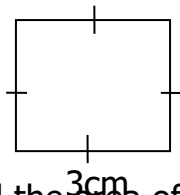


LESSON 42

TOPIC : 2 Dimensional figures

SUBTOPIC : Find the area of a square

CONTENT : Find the area of a square whose side is 3cm.



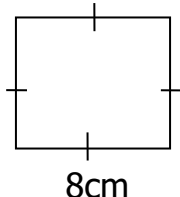
Find the area of:

$$\text{Length} = 3\text{cm}$$

$$\text{Area} = S \times S$$

$$= 3\text{cm} \times 3\text{cm}$$

$$= 9\text{cm}^2$$



$$\text{Area} = S \times S$$

$$= 8\text{cm} \times 8\text{cm}$$

$$= 64\text{cm}^2$$

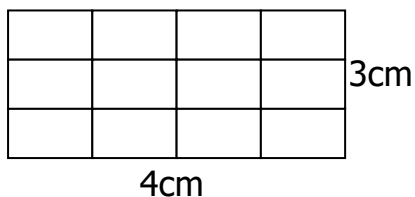
ACTIVITY: Exercise 12a page 210.

LESSON 43

TOPIC : 2 Dimensional figures

SUBTOPIC : Find the area of a rectangle.

CONTENT : Find the area of a rectangle whose length is 10m by 6m.

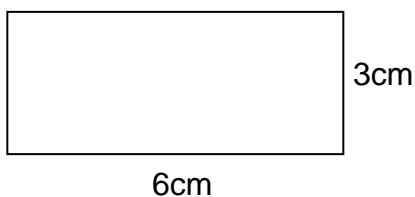


$$A = L \times W$$

$$A = 4\text{cm} \times 3\text{cm}$$

$$A = 12\text{cm}^2$$

2. Workout the area of the rectangle below



ACTIVITY Exercise 6:16 page 105 New Mk pupils bk 4

LESSON 44

TOPIC : 2 Dimensional figures
SUBTOPIC : Circles (making circles)

CONTENT : Circles will be drawn in different forms like using:

- Hard papers / circular objects.
- Strings
- The big toe
- A pair of compasses

ACTIVITY: Exercise will be given.

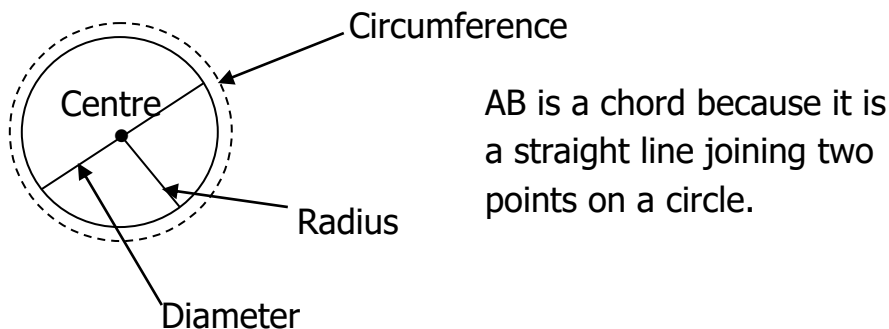
- Draw a circle using
- * a circular object

* a pair of compasses.

LESSON 45

TOPIC : 2 Dimensional figures
SUBTOPIC : Parts of a circle. (Naming)

CONTENT : Parts shown on circles



ACTIVITY: Exercise 7e page 130

LESSON 46

TOPIC : 2 Dimensional figures
SUBTOPIC : Finding the diameter when given the radius.

CONTENT : Example

Radius	2cm	6cm	7cm	9cm	10cm	13cm
Diameter	4cm	<u>12cm</u>	<u>14cm</u>	<u>18cm</u>	_____	_____

$$\text{Diameter} = r + r$$

$$= 7\text{cm} + 7\text{cm} = 14\text{cm}$$

$$\begin{aligned}\text{Diameter} &= r + r \\ &= 6 + 6 = 12\text{cm}\end{aligned}$$

$$\begin{aligned}\text{Diameter} &= r + r \\ &= 9 + 9 = 18\text{cm}\end{aligned}$$

$$\begin{aligned}\text{Diameter} &= r + r \\ &= 10 + 10 = 20\text{cm}\end{aligned}$$

ACTIVITY: Exercise given on page 131 Mk bk 4. (number 4)

LESSON 47

TOPIC : 2 Dimensional figures
SUBTOPIC : Finding the radius when given the diameter.
CONTENT : Example

Find the radius of a circle whose diameter is 12cm.

$$\begin{aligned}\text{Radius} &= \frac{\text{Diameter}}{2} \\ &= \frac{12}{2} = 6\text{cm}.\end{aligned}$$

ACTIVITY: Exercise given on page 131 (numbers 2 and 3)

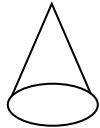

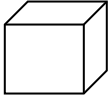
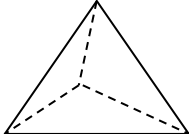
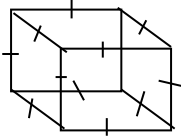
LESSON 48

TOPIC : 2 Dimensional figures
SUBTOPIC : Polygons. (Drawing and naming polygons)
CONTENT : Examples of common polygons.

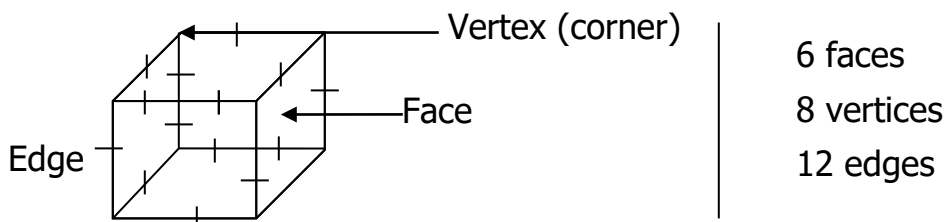
Name	Number of sides
Triangle	3
Quadrilateral	4
Pentagon	5
Hexagon	6

ACTIVITY: Exercise on page 136 Mk bk 4

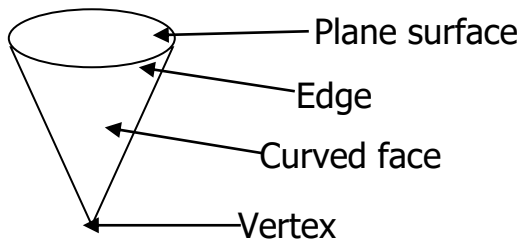
LESSON 49**TOPIC : 3 Dimensional Figures****SUBTOPIC : Identifying and naming 3 dimensional figures.****CONTENT :** Solid shapes.

Geometric solid shapes	Name
	Cone
	Cylinder
	Cuboid
	Triangular Pyramid
	Cube

ACTIVITY: Exercise 7b page 126. MK bk 4

LESSON 50**TOPIC : 3 DIMENSIONAL GEOMETRY****SUBTOPIC : Naming parts of the solid shapes****CONTENT :** Cube.

Cone



2 faces
1 vertex
1 edge

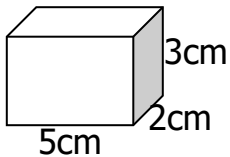
ACTIVITY: Exercise 7c page 127

LESSON 51

TOPIC : 3 DIMENSIONAL GEOMETRY

SUBTOPIC : Finding volume of a cuboid and the area of the shaded part.

CONTENT : Example:



$$V = L \times w \times h$$

$$V = 5\text{cm} \times 2\text{cm} \times 3\text{cm}$$

$$\underline{V = 30\text{cm}^3}$$

Area of the shaded part

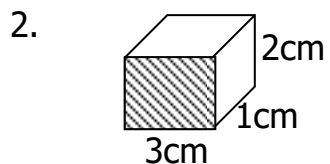
$$\text{Area} = L \times w$$

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

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

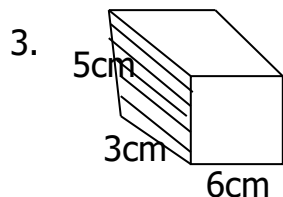
ACTIVITY: Exercise will be given like:

1. Find the volume of a cuboid whose length is 10cm, width 5cm and height 2cm.



(i) Find the volume.

(ii) Find the area of the shaded part.



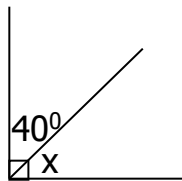
(i) Find the Area of the shaded part.

(ii) Find the volume

Refer to exercise 12a page 220 MK bk 4 (Old Edition)

LESSON 52**TOPIC : 3 DIMENSIONAL GEOMETRY****SUBTOPIC : Types of angles and finding the value of the unknown**

CONTENT : Right angles or complementary angles of only two angles.
 Straight angles or supplementary angles.
 Finding the value of x

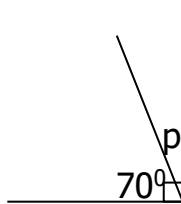


$$x + 40^{\circ} = 90^{\circ}$$

$$x + 40^{\circ} - 40^{\circ} = 90^{\circ} - 40^{\circ}$$

$$x = 90^{\circ} - 40^{\circ}$$

$$x = 50^{\circ}$$



$$p + 70^{\circ} = 90^{\circ}$$

$$p + 70^{\circ} - 70^{\circ} = 90^{\circ} - 70^{\circ}$$

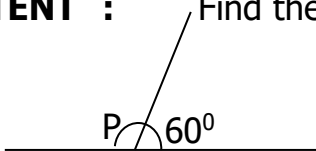
$$p = 90^{\circ} - 70^{\circ}$$

$$\underline{p = 20^{\circ}}$$

ACTIVITY: Exercise 7k page 139 Mk bk 4

LESSON 53**TOPIC : 3 DIMENSIONAL GEOMETRY****SUBTOPIC : Straight angles or supplementary angles of only two angles**

CONTENT : Find the value of angle P.

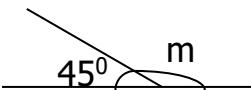


$$P + 60^{\circ} = 180^{\circ}$$

$$P + 60^{\circ} - 60^{\circ} = 180^{\circ} - 60^{\circ}$$

$$P = 180^{\circ} - 60^{\circ}$$

$$\underline{P = 120^{\circ}}$$



$$m + 45^{\circ} = 180^{\circ}$$

$$m + 45^{\circ} - 45^{\circ} = 180^{\circ} - 45^{\circ}$$

$$m = 180^{\circ} - 45^{\circ}$$

$$\underline{m = 135^{\circ}}$$

ACTIVITY: Exercise 7p Page 142.

LESSON 54**TOPIC : GRAPHS AND DATA INTERPRETATION****SUBTOPIC : Tallies****CONTENT :** Complete the tally marks
$$\begin{array}{l} \text{HHH} \quad \text{III} = 8, \quad \text{HHH} \text{ HHH} = 10, \quad \text{HHH} \text{ HHH} \text{ III} = 13, \quad \text{HHH} \text{ HHH} \text{ HHH} \text{ HHH} \text{ HHH} \text{ I} = 26 \\ \text{HHH} \text{ IIII} = 9 \end{array}$$

Making tally marks.

$$7 = \text{HHH} \text{ HH} \text{ II} \quad 5 = \text{HHH}, \quad 12 = \text{HHH} \text{ HH} \text{ II}$$

$$17 = \text{HHH} \text{ HH} \text{ HH} \text{ II}, \quad 9 = \text{HHH} \text{ IIII}$$

ACTIVITY: Exercise 6a page 106

LESSON 55**TOPIC : GRAPHS AND DATA INTERPRETATION****SUBTOPIC : Tallies****CONTENT :** The information below shows the number of cars of different colours counted by pupils.

Days of the week	White	Red	Black	Maroon
Monday	HHH	IHH III	II	III
Tuesday	HHH I	HHH II	HHH II	I
Wednesday	HHH HH I	I	III	HHH IIII
Thursday	HHH I	III	HHH	HHH HH

(a) How many cars were seen on Monday?





18 cars were seen on Monday

(b) Which colour appeared most?

White colour appeared most.

ACTIVITY: Exercise 6b page 107

LESSON 56**TOPIC : DATA HANDLING (GRAPHS)****SUBTOPIC : Pictograph****CONTENT :** The graph below shows the number of balls picked by four sisters from a shop.

     	Doreen
  	Diana
   	Daphine
  	Daizy

Scale. =  5 balls.

(a) Which two sisters picked the same number of balls?

Diana and Daizy picked the same number of balls.

(b) How many balls did Doreen and Daphine pick?

Doreen = 30, Daphine 20

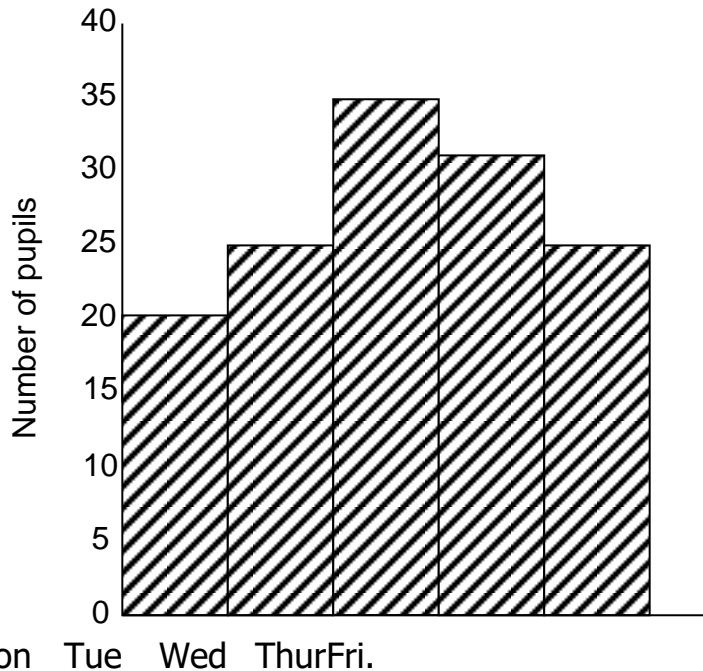
 $= 30 + 20 = 50$

Doreen and Daphine picked 50 balls.

ACTIVITY: Exercise 6f page 111 and 112.

LESSON 57**TOPIC : GRAPHS****SUBTOPIC : Bar graphs**

CONTENT : The graph below shows the daily attendance of P.4 pupils for a week.



Days

(a) How many pupils were present on Thursday?

Thirty pupils were present on Thursday

(b) On which day was the biggest number of children present?

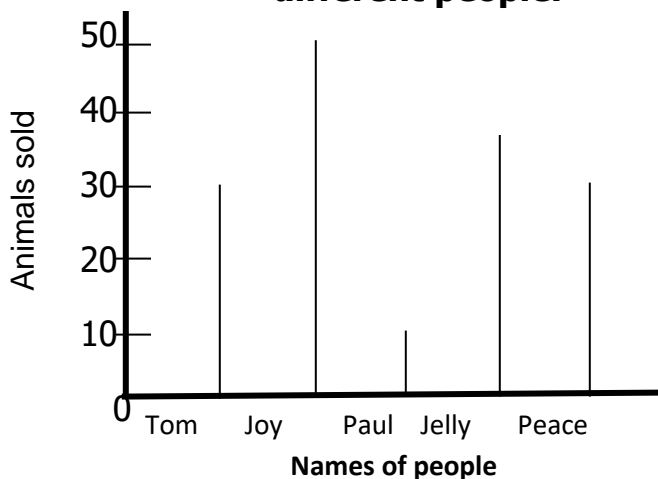
On Wednesday, there was the biggest attendance.

ACTIVITY : Activity 6g page 113 Mk bk 4

LESSON 58

TOPIC : **LINE GRAPHS**

SUBTOPIC : **The graph below shows the number of animals sold by different people.**



(a) How many animals did Joy sell?

Joy sold 50 animals.

(b) Find the number of animals sold by Jelly and peace.

Jelly sold 40, Peace sold 30

$$40 + 30 = 70$$

They sold 70 animals.

SCHEME OF WORK FOR P.4 MATHEATICS TERM III 2017

WK	PD	THEME	SUB THEME	CONTENT	SUBJECT COMPETECIES	LANGUAGE COMPETENCIES	METHODS	LIFE SKILL	T/L AIDS	T/L ACTS	REF
		M E A S U R E S	Money	<ul style="list-style-type: none"> ▪ Recognition of money. ▪ Coins ▪ Bank notes ▪ Change shs. to cents and vice versa. ▪ Addition of money ▪ Subtracting of money. ▪ Multiplication of money. ▪ Direct proportions. ▪ Buying and selling shopping bills. ▪ Division of money. ▪ Profit and loss. ▪ Postage rates. 	<ul style="list-style-type: none"> • Identifies coins and notes. • Buying and selling. • Calculates simple profits and loss. • Costs and pricing. 	<ul style="list-style-type: none"> • Describes different coins and notes. • Roles playing using money in English. • Uses examples to describe meaning of profit and loss. 	<ul style="list-style-type: none"> • Discussion. • Explanation. • Observation. • Demonstration • Dramatization. • Role playing. 	<ul style="list-style-type: none"> ▪ Effective communication. ▪ Critical thinking. ▪ Creativity. 	<ul style="list-style-type: none"> ▪ Coins. ▪ Bank notes. ▪ Classroom shape ▪ Real objects. ▪ Backs pens. ▪ Tins ▪ Envelopes ▪ Straws ▪ Bottles etc 	<ul style="list-style-type: none"> Role playing using money. Role playing the buyer and seller. Describing coins notes. Giving examples of profit and loss. Working out problems involving profits and loss. 	
			Time	<ul style="list-style-type: none"> • Revision on time. • Telling time. • Changing hours to minutes. • Addition of time. • Word problems. • Subtraction of time. • Word problem • Time in a.m. and 	<ul style="list-style-type: none"> ▪ Uses different types of clocks to tell time. ▪ Converts measures of time. 	<ul style="list-style-type: none"> ▪ Tells time in the local language and English. ▪ Gives months of the year in English. 	<ul style="list-style-type: none"> ▪ Explanation. ▪ Discussion ▪ Question and answer. ▪ Observation. ▪ Demonstration. ▪ Role playing. 	<ul style="list-style-type: none"> ▪ Effective communication. ▪ Critical thinking. ▪ Creative thinking. ▪ Logical thinking. ▪ Effective 	<ul style="list-style-type: none"> ▪ Wall clocks. ▪ Calendars. ▪ Timetable. 	<ul style="list-style-type: none"> ▪ Using real or model clock, the learner tells time. ▪ Making a calendar showing what month of 	<ul style="list-style-type: none"> New edition MTC MK pupils Bk 4 Pg. 161 185

				p.m.				communicat ion.		the year. ▪ Working	
				<ul style="list-style-type: none"> Changing days to hours. Changing hours to days. Changing weeks to days. Changing days to weeks. Addition of weeks and days Subtraction of time in weeks and days. 	months to days.	timetable in his / her exercise book.	▪	▪ Critical thinking.	▪	<ul style="list-style-type: none"> out problems involving time. ▪ Reading. 	
		MEASU REMEN TS	Capacity	<ul style="list-style-type: none"> Half and quarter litres. Addition of litres as half litres. Addition of litres and milliliters. 	<ul style="list-style-type: none"> Adds litres as half litres and milliliters. 	<ul style="list-style-type: none"> Expresses capacity of different items 	<ul style="list-style-type: none"> ▪ Discussion. ▪ Explanation. ▪ Question and answer. 	<ul style="list-style-type: none"> ▪ Critical thinking. ▪ Effective communication. ▪ Logical reasoning. 	<ul style="list-style-type: none"> ▪ ½ litre containers. ▪ 1 litre container. 	<ul style="list-style-type: none"> ▪ Packing ▪ Adding. 	New MK MTC MK Bk. 4 pg. 222 – 227.
			Weight and volume (mass)	<ul style="list-style-type: none"> Half and quarter Kg. Changing Kg and gm and vice versa. Add and subtract kg and gm. Dozens, crates, trays. Volume of cubes and cuboids. 	<ul style="list-style-type: none"> Changes Kgms go gms and vice versa. Adds and subtracts kgms and gms. 	<ul style="list-style-type: none"> Expresses weight and volume of different items. 	<ul style="list-style-type: none"> ▪ Discussion. ▪ Explanation ▪ Question and answer. 				New MK MTC pupils Bk 4 Pg. 228 – 235

		A L G E B R A	Equations with and without letters	<ul style="list-style-type: none"> Revision (using letters for numbers) Adding letters e.g. $P+P = 2P$ $2k + 4k = 6k$ Finding perimeter using letters for numbers. Subtracting letters. Collecting like terms involving addition only . Substitution. <p>Equation of:</p> <ul style="list-style-type: none"> Addition Subtraction Division e.g. $2x = 8, x \div 2 = 4$ Forming equations of addition and subtraction. 	<ul style="list-style-type: none"> Adds letters. Uses letters for numbers. Finds perimeter using letters for numbers. Collects like terms. Does substitution. Solves given equations. Forms equations and solve them. 	<ul style="list-style-type: none"> Reads and creates simple equations without letters. 	<ul style="list-style-type: none"> Guided discovery. Participatory approach. Discussion. Brain storming. 	<ul style="list-style-type: none"> Effective communication. Critical thinking. Problem solving. 	<ul style="list-style-type: none"> Books. Pens Text books. 	-Adding -Subtract -Forming equations	MK primary pupils bk 4 pg. 245- 260
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TOPICAL BREAKDOWN FOR P.4 MATHEMATICS TERM III 2017

THEME	TOPIC	SUB-TOPIC	DURATION	OUT COMES
MEASUREMENTS	TIME	<ul style="list-style-type: none"> • Days of the week • Conversion of days to weeks and vice versa. • Month of the year. • Converting years into months and vice versa. • Converting months to days • Telling time • Changing days to hours and vice versa • Changing hours to minutes and vice versa. • Finding duration. 	2 week (1-3)	<ul style="list-style-type: none"> • The learner is able to apply the knowledge of time in real life situation.
	Length Mass Capacity	<ul style="list-style-type: none"> • Measuring length (M and cm) • Finding perimeter and area of a square, rectangle and triangle. • Measuring mass • Converting mass (Kg to g and vice versa) • Measuring capacity. • Litres to milli8litres • Word problems involving capacity 	4 weeks (8 – 9) (3 – 7)	<ul style="list-style-type: none"> • The learner is able to recognize and use standard instruments and units for measuring mass, length and capacity
ALGEBRA	Equations	<ul style="list-style-type: none"> • Collecting like terms • Finding the missing numbers in (1)addition,(2)subtraction, (3)multiplication and (4)division. • Word problems on missing numbers. • Substitution. • Equations with addition • Subtraction • Multiplication • Division • Forming and solving equations. 	2 weeks (7 – 9)	<ul style="list-style-type: none"> • The learner is able to solve mathematical problems and puzzles using the knowledge of Algebra.

TERM III**LESSON 1****TOPIC : MONEY****SUBTOPIC : Recognition of money
Finding the value of small denominations****CONTENT :**

Example: Peter had 2 notes of 1000/=. How much money was he having?

COINS	BANK NOTES
50 /=	1000/=
100/=	2,000/=
200/=	5,000/=
500/=	10,000/=
1000/=	20,000/=
	50,000/=

ACTIVITY : Exercise 8a page MK bk 4 page 148.

LESSON 2**TOPIC : MONEY (measurements)****SUBTOPIC : Addition of money****CONTENT :** Example: A man had 4800/= and he was given sh. 1200 by his friend. How much money did he have altogether?

Sh. 4800

+ Sh. 1200Sh. 6000

A man had sh. 6000 altogether.

ACTIVITY: Exercise 8b page 149 MK 4

LESSON 3**TOPIC : MONEY (Measurements)****SUBTOPIC : Subtraction of money**

CONTENT : Example: How much change will you get from a one thousand shilling note if you spend sh. 350?

You had sh. 1000

You spent sh. 350

Sh. 650

ACTIVITY: Exercise 8c page 150 of MKbk4

LESSON 4**TOPIC : MONEY (Measurements)****SUBTOPIC : Multiplication of money**

CONTENT : The cost of 1 loaf of bread is sh. 1800. Find the cost of 3 loaves.
Shs 1800

x 3

Sh. 5400

ACTIVITY: Exercise 8d page 151 of MKbk4

LESSON 5**TOPIC : MONEY (Measurements)****SUBTOPIC : Buying and selling (Shopping Bills) (Price list)**

CONTENT : Example

Item	Price in shillings
1 bar of soap	1000/=
1 kg of sugar	1800/=
1 kg of maize flour	1200/=
1 packet of salt	400/=
An egg	150/=

Questions

- (a) Find the cost of 3 kg of sugar.
- (b) If Allen bought 4kg of maize flour and 1 bar of soap. How much money did she pay?
- (a) Calculate the cost of buying 1 bar of soap, 1kg of sugar, 1kg of flour, 1 packet of salt.

(b) Find the total expenditure if one buys all the items above.

ACTIVITY: Exercise page 152 (Mk New Edition)

LESSON 6

TOPIC : MONEY (Measurements)

SUB TOPIC: Shopping Bills

CONTENT : Example 1

Mariam went to the school canteen and bought the following items

3 chaps at 500/= each.

4 chapats at 800/=

1 bottles of soda at 1000/= each.

(a) Find her total expenditure.

(b) Find her balance if she went with 8000/=

Working

Chaps

500=

x 3

1500

Chapatis

800=

x 4

3200=

Soda

1000=

x 2

2000=

Total expenditure

Sh. 3200

1500

+ 2000

Sh. 6700

Balance= Sh. 8000

- 6700

Sh. 1300

ACTIVITY: Teachers collection.

LESSON 7

TOPIC : MONEY (Measurements)

SUBTOPIC : Division of money

CONTENT : Example

4 books cost 1200/=. What is the cost of one book?

4 books cost - 1200/=

1 book will cost - $\frac{1200}{4} = 300/=$

ACTIVITY: Exercise 81 page 153 (Mk new Edition)

LESSON 8**TOPIC : MONEY (Measurements)****SUBTOPIC : Finding profit****CONTENT :** Profit = selling price – buying price/ cost price

Example: Abdul bought a shirt at sh. 800

He sold it at 1000/=. What was his profit?

Buying price Sh. 800

Selling price Sh. 1000

$$\begin{aligned}
 \text{Profit} &= \text{S.P} - \text{B.P} \\
 &= \text{Sh. } 1000 - 800 \\
 &= \text{Sh. } 200
 \end{aligned}$$

ACTIVITY: Exercise 8k page 155 (Old Mk) or 8h page 156 (new Edition)

LESSON 9**TOPIC : MONEY (Measurements)****SUBTOPIC : Finding Loss****CONTENT :** Example: John bought a shirt at 7200/= and sold it at 6000/=. Calculate his loss.

$$\text{Loss} = \text{B.P} - \text{S.P} \quad \text{or} \quad \text{CP} - \text{SP}$$

$$= \text{B.P} = 7200/=$$

$$\text{Loss} = 7200/= - 6000/=$$

$$= 1200/=$$

$$\text{Loss} = 1200/=$$

ACTIVITY: Exercise 8i page 157 of MK bk 4.

LESSON 10**TOPIC : MONEY (Measurements)****SUBTOPIC : Postage rates****CONTENT :** Study this table.

Articles	Destination	Charge
Letter	Uganda	Sh. 150
	East Africa	Sh. 400
	Africa	Sh. 500
	Europe	Sh. 500
	Asia	Sh. 500
	America	Sh. 550
Small parcels (Air)	Uganda	Sh. 1200
	East Africa	Sh. 10,000
	Africa	Sh. 11,700
	Europe	Sh. 16,000
	Asia	Sh. 22,500
	America	Sh. 8,450

Example:

Joseph sends 2 letters to Kenya and 3 letters to Tanzania. How much will he pay?

2 letters to Kenya will pay shs. $400 \times 2 = \text{sh. } 800$

3 letters to Tanzania will pay shs. $400 \times 3 = \underline{\text{sh. } 1200}$

Total Cost $= \underline{\text{Sh. } 2000}$

Therefore, Joseph will pay 2000/=

ACTIVITY: Exercise 8j on page 159 of Mk bk 4

LESSON 11**TOPIC : TIME****SUBTOPIC : Telling time****CONTENT :** Show the following time on a clock face.

(a) A quarter past 9 (b) 20 minutes to 11

ACTIVITY: Exercise 9a on page 162 of Mk bk 4.

LESSON 12**TOPIC : TIME****SUBTOPIC : Changing hours to minutes****CONTENT :** Examples

(a) Change 4hrs to minutes

$$1 \text{ hr} = 60 \text{ minutes}$$

$$4 \text{ hrs} = (4 \times 60) \text{ minutes}$$

$$\underline{\underline{240 \text{ minutes}}}$$

b) How many minutes are in $3 \frac{1}{4}$ hours?

$$\Rightarrow 3 \frac{1}{4} \text{ hrs} = (3 \times \frac{1}{4}) \text{ hours}$$

$$1 \text{ hr} = 60 \text{ min}$$

$$3 \text{ hrs} = (3 \times 60) \text{ minutes}$$

$$180 \text{ minutes}$$

$$\frac{1}{4} \text{ hr} = \underline{15} \text{ minutes}$$

$$3 \frac{1}{4} \text{ hrs} = \underline{\underline{195}} \text{ minutes}$$

Exercise 9b page 163 of MK bk 4

LESSON 13**TOPIC : TIME****SUBTOPIC : Writing the time in hours and minutes****CONTENT :** Examples: Write 70 minutes in hours and

$$1 \text{ hr} = 60 \text{ minutes}$$

$$70 \text{ min} = 60 \overline{)70} \begin{array}{r} 1 \text{ hr } 10 \\ 60 \\ \hline 10 \end{array}$$

$$70 \text{ minutes} = 1 \text{ hour } 10 \text{ minutes.}$$

ACTIVITY: Exercise 9c page 163 of Mk bk 4

LESSON 14**TOPIC : TIME****SUBTOPIC : Word problems on changing minutes to hrs****CONTENT :** Examples: A lesson took 140 minutes

How long was that lesson in hours.

Solution: $60 \text{ minutes} = 1 \text{ hr}$

$$140 \text{ minutes} = 60 \overline{)140} \begin{array}{r} 2r20 \\ \underline{120} \\ 020 \end{array}$$

So, 140 minutes = 2 hrs 20 minutes.

ACTIVITY: Exercise 9d page 164 of MK bk 4

LESSON 15

TOPIC : TIME

SUBTOPIC : Addition of time

CONTENT : (a)	HRS	MIN	(b)	HRS	MIN	
	3	40		1 ¹	50	65 – 60 = 05
+ 4	30-60	2 15				
	<u>8</u>	<u>10</u>			<u>10</u>	<u>3 05</u>

ACTIVITY: Exercise 9e page 165 of MK bk 4.

LESSON 16

TOPIC : TIME

SUBTOPIC : Word problems of addition of time

CONTENT : Examples:

A taxi driver took 2 hours 40 minutes to drive from Kampala to Masaka and 1 hour 45 minutes from Masaka to Kabula. How much time did he take altogether?

	HRS	MIN
	2	40
+1	45	
	<u>4</u>	<u>25</u>

85 ÷ 60
= 1r25

ACTIVITY: Exercise 9f page 167 of Mk bk 4

LESSON 17

TOPIC : TIME

SUB TOPIC: Subtraction of time

CONTENT : Examples

(a)	Hrs	Min	(b)	HrsMin
	4 ³	80		2 85
	<u>4</u>	<u>20</u>		<u>3</u> <u>25</u>
- 1	50		- 1	45
	<u>1</u>	<u>30</u>		<u>1</u> <u>40</u>

ACTIVITY: Exercise 9g page 168 Mk bk 4

LESSON 18

TOPIC : TIME

SUBTOPIC : Word problems of time (Subtraction)

CONTENT :

Bankunda spent 5 hours 20 minutes at school, she played for 1 hour 30 minutes. For how long did she stay in class?

Total time at school

Total time at school = $\begin{array}{r} 4 \\ 5 \text{hrs } 20 \text{min} \end{array}$

Time spent playing $\begin{array}{r} -1 \text{hr } 30 \text{min} \\ \hline \end{array}$

Time in class $\begin{array}{r} = 3 \quad 50 \end{array}$

ACTIVITY: Exercise 9h page 169 of Mk bk 4

LESSON 19

TOPIC : TIME

SUBTOPIC : Writing time in a.m and p.m

CONTENT : Examples

(a) Express 6 O'clock in the morning using a.m. or p.m.

5 O'clock = 6:00a.m

(b) Express 8 O'clock in the evening in figures:

8 O'clock = 8:00p.m

ACTIVITY: Exercise 9k and 9L pages 174 and 175.

LESSON 20

TOPIC : TIME

SUBTOPIC : Finding duration

CONTENT : Luyiga walked from her home at 7:15a.m and reached school at 8:15a.m. How long did it take her?

	Hrs	Min
Ending time	=	8 : 15a.m
Starting time	=	<u>7 : 15a.m</u>
Duration	=	<u>1 00</u>

So, she took 1 hour.

ACTIVITY: Exercise 9m page 176 of Mk bk 4

LESSON 21**TOPIC : TIME****SUBTOPIC : Changing days to hours**

CONTENT : Examples
 How many hours are in 5 days?
 1 day = 24 hours
 5 days = 24 hrs

$$\begin{array}{r} \times 5 \\ 5 \text{ days} = \underline{120\text{hrs}} \end{array}$$

ACTIVITY: Exercise 9(o) page 177 of Mk bk 4

LESSON 22**TOPIC : TIME****SUBTOPIC : Changing hours to days**

CONTENT : Examples: How many days are in 72 hours?
 Solution 24hrs make 1 day
 1hr makes $\frac{1\text{day}}{24\text{hours}}$
 72 hrs make $\frac{1\text{day}}{24\text{hours}} \times 72\text{hrs}$

$$\begin{array}{r} \cancel{24} \\ 72\text{hrs} = 3 \text{ hours.} \end{array}$$

ACTIVITY: Exercise: 9n page 177 of Mk bk 4.

LESSON 23**TOPIC : TIME****SUBTOPIC : Changing weeks to days**

CONTENT : Examples: How many days are in 8 wks?
 1wk = 7days
 8wks = 8 x 7 days
 = 56days

ACTIVITY: Exercise 9p page 178 of MK bk 4

LESSON 24

TOPIC : TIME

SUBTOPIC : Changing days to weeks

CONTENT : Examples: How many weeks are there in 63 days?
7 days make 1 week

$$63 \text{ days} = \frac{63}{7} \text{ weeks}$$

$$= 9 \text{ weeks}$$

ACTIVITY: Exercise 9q page 178 of MK bk 4

LESSON 25

TOPIC : TIME

SUBTOPIC : Addition of time in weeks and days

CONTENT : (a) Wks Days
1 3

$$+ \begin{array}{r} 2 \\ 5 \end{array}$$

$$\begin{array}{r} 4 \\ 1 \end{array}$$

$$8 \div 7 = 1r1$$

(b) A man took 5 weeks 5 days to make a wooden bed and 4 weeks 6 days to make a chair, How long did the man take on both?

Wks Days

5 5

$$+ \begin{array}{r} 4 \\ 6 \end{array}$$

$$\begin{array}{r} 10 \\ 4 \end{array}$$

$$11 \div 7 = 1r4$$

ACTIVITY: Exercise 9s page 180 and 181 (New edition of MKbk 4)

LESSON 26

TOPIC : TIME

SUBTOPIC : Subtraction of time in wks and days

CONTENT : Example: Wks Days
 $\begin{array}{r} 2 \\ 3 \end{array}$ $\begin{array}{r} 9 \\ 2 \end{array}$

$$\begin{array}{r} - 1 \\ 5 \\ 1 \\ 4 \end{array}$$

ACTIVITY: Exercise 9t page 182 of Mk bk 4

LESSON 27

TOPIC : measure
SUBTOPIC : months of the year

1. Which months have
 - i) 30 days
 - ii) 31 days
2. How many days does February have?

Interpretation of calendars

Activity: pg150 , a new Mk 2000 bk

LESSON 28

TOPIC : measure
SUBTOPIC : converting years into months

1. Change 3 years into months
 - 1 year = 12 months
 - 3 years = (3×12) months
 - = 36 months

Activity: pg 151, a new Mk bk 4

LESSON 29

TOPIC : measure
SUBTOPIC : converting months to years

1. Our baby is 24 months old. How old is she in years?
 - 12 months = 1 year
 - 24 months = $(24 \div 12)$ years
 - = 2 years

Activity: pg 152 a new Mk bk 4

LESSON 30

TOPIC : measure
SUBTOPIC : converting months to days

1. How many days are there in the first two months of the year?
 - Jan = 31 days
 - Feb = 28 days
 - Total = 59 days

2. How many days are in the last 3 months of the year?

Activity: pg 153 a new Mk bk 4

LESSON 31

TOPIC : LENGTH, MASS AND CAPACITY

SUBTOPIC : Addition in metres and centimeters

CONTENT : Examples

$$\begin{array}{r} \text{Add: } 2\text{m } 45\text{cm} \\ + 6\text{m } 36\text{cm} \\ \hline 8 \quad 81 \end{array}$$

$$\begin{array}{r} \text{Add: } 8\text{m } 25\text{cm} \\ + 6\text{m } 85\text{cm} \\ \hline 15 \quad 10 \end{array}$$

ACTIVITY: Exercise 10d page 187 MK book 4.

LESSON 32

TOPIC : LENGTH, MASS AND CAPACITY

SUBTOPIC : Addition in metres and centimeters in word problem

CONTENT : Example 1

Namusoke had 8m 55cm of cloth. She later bought 10m 85cm of cloth. Find the total length of cloth she has now.

	M	CM
Namusoke had	8	55
She later bought	+ 10	85
Total cloth bought	<u>19</u>	<u>40</u>

ACTIVITY: Exercise 10e page 188.

LESSON 33

TOPIC : MEASURES (Length)

SUBTOPIC : Subtraction of metres and centimetres

CONTENT : Example 1

$$\begin{array}{r} \text{Subtract : } \text{M} \quad \text{CM} \\ 6 \quad 80 \\ - 2 \quad 60 \\ \hline 4 \quad 20 \end{array}$$

$$\begin{array}{r} \text{Subtract : } \text{M} \quad \text{CM} \\ 8 \quad 0 \quad 24 \quad 100+24=124 \\ - 5 \quad 30 \\ \hline 3 \quad 94 \end{array}$$

ACTIVITY: Exercise 10f page 188 MK MTC bk 4.

LESSON 34

TOPIC : LENGTH, MASS AND CAPACITY

SUBTOPIC : Subtraction of metres and centimeters in word problem

CONTENT : Example 1

Otim had a ribbon measuring 15m 36cm. He cut off 9m 21cm. What length remained?

	M	CM
Otim had	15	36
He cut off	- 9	21
	<u>6</u>	<u>15</u>

Kaseggu had a string measuring 25m 15cm. He cut off 18m 35cm. What length of the string did he remain with?

	M	CM		M	CM
His string measured	25	15	Subtract:	9	24
He cut off	- 18	35		- 5	30
Length of the string left	<u>6</u>	<u>80</u>		<u>3</u>	<u>94</u>

ACTIVITY: Exercise 10g page 189.

LESSON 35

TOPIC : LENGTH, MASS AND CAPACITY

SUBTOPIC : Changing kilometers into metres

CONTENT : Example 1

Example 1

Change 5km to metres.

1km = 1000m

5km = 5 x 1000

= 5000m

∴ 5km = 5000m

Example II

Change 12km to metres.

1km = 1000m

12km = 12 x 1000

= 12000m

∴ 12km = 12000m

ACTIVITY: Exercise 10m and 10n page 195.

LESSON 36

TOPIC : LENGTH, MASS AND CAPACITY

SUBTOPIC : Changing metres to kilometers

CONTENT : Example 1

Change 3000m to km

Since 1000m = 1km

$$3000\text{m} = \frac{3000}{1000} = 3\text{km}$$

ACTIVITY: Exercise 10j page 193

LESSON 37

TOPIC : LENGTH, MASS AND CAPACITY

SUBTOPIC : Writing as kilometers and metres

CONTENT : Example 1

Write 800m as km and m

KM	HM	DM	M
	8	0	0

= 0 Km 800m
or 0.8km

Example II

Write 7430m as km and m

KM	HM	DM	M
7	4	3	0

= 7km 430m
Or 7.43km.

ACTIVITY: Exercise 10k page 193 (New Edition)

LESSON 38

TOPIC : LENGTH, MASS AND CAPACITY

SUBTOPIC : Addition of long distances

CONTENT : Example 1

Add: 15km 880m to 6km 750m.

$$\begin{array}{r}
 \text{Km} \quad \text{m} \\
 15 \quad 880 \\
 + 6 \quad 750 \\
 \hline
 22 \quad 630
 \end{array}$$

$$\begin{array}{r}
 \text{Add: Km} \quad \text{m} \\
 \quad 13 \quad 530 \\
 + 8 \quad 670 \\
 \hline
 22 \quad 200
 \end{array}$$

ACTIVITY: Exercise 10p page 197

LESSON 39

TOPIC : LENGTH, MASS AND CAPACITY

SUBTOPIC : Subtraction of long distances

CONTENT : Example 1

Subtract	Km	m
	46	260
-	12	370
	<u>33</u>	<u>890</u>

Example 2

Subtract:	Km	m
	280	455
-	130	690
	<u>149</u>	<u>765</u>

ACTIVITY: Exercise 10q page 198

LESSON 40

TOPIC : LENGTH, MASS AND CAPACITY

SUBTOPIC : Half and quarter litres

CONTENT : Example

(a) How many half litre bottles of water can fill a jerrycan of 10litres?

1 litre = 2 half litres

10 litres = 10 x 2 half litres

= 20 half litres.

(b) How many $\frac{1}{4}$ litre bottles of milk can fill a jerrycan of 20 litres?

1 litre = 4 quarter litres

20 litres = (4 x 20) quarter litres

= 80 quarter litres.

ACTIVITY: Exercise 13a pages 223 and 224.

LESSON 41

TOPIC : LENGTH, MASS AND CAPACITY

SUBTOPIC : Addition of litres and half litres

CONTENT : Example.

Add 12 litres + 20 litres

12litres

+20litres

32litres

2. Add 1 $\frac{1}{2}$ litres + 2 $\frac{1}{2}$ litres

ACTIVITY: Exercise13b pages 224-225 MKbk 4 old edition

LESSON 42**TOPIC : LENGTH, MASS AND CAPACITY****SUBTOPIC : Changing liters to mililitres**

Change 5 litres to mililitres

$$1 \text{ liter} = 1000\text{ml}$$

$$\begin{aligned} 5\text{litres} &= (5 \times 1000) \text{ ml} \\ &= 5000\text{ml} \end{aligned}$$

LESSON 43**TOPIC : LENGTH, MASS AND CAPACITY****SUBTOPIC : converting mililitres to litres**

Express 4000ml to litres

$$1000 \text{ ml} = 1 \text{ litre}$$

$$4000\text{ml} = 4000$$

$$\frac{4000}{1000}$$

$$= 4 \text{ litres} \quad \text{activity: pg184 .new Mk bk 4}$$

LESSON 44**TOPIC : LENGTH, MASS AND CAPACITY****SUBTOPIC : Changing kilograms to grams****CONTENT : Example**(a) Change $4\frac{1}{2}$ kg into grams

$$1\text{kg} = 1000\text{g}$$

$$4\text{kg} = 4000\text{g}$$

$$\frac{1}{2} \text{ kg} = 500\text{g}$$

$$4\frac{1}{2} \text{ kg} = \underline{\underline{4500\text{g}}}$$

(b) Change $\frac{4}{5}$ kg into grams

$$1\text{kg} = 1000\text{g}$$

$$\frac{4}{5} \text{ kg} = \frac{4}{5} \times \overset{200}{1000}\text{g}$$

$$= \underline{\underline{800\text{g}}}$$

ACTIVITY: Exercise 14c page 230 of Mk bk 4

LESSON 45**TOPIC : LENGTH, MASS AND CAPACITY****SUBTOPIC : Changing grams to kilograms****CONTENT : Example**

(a) Change 2000g into kg

$$1000\text{g} = 1\text{kg}$$

$$2000\text{g} = \frac{\cancel{2000}^{\text{g}}}{\cancel{1000}^{\text{g}}} \times 1\text{kg}$$

$$= \underline{\underline{2\text{kg}}}$$

(b) Change 4500g into kg.

$$1000\text{g} = 1\text{kg}$$

$$4500\text{g} = \frac{4500}{1000} = \frac{\cancel{45}^{\text{g}}}{\cancel{10}^{\text{g}}}$$

$$= 4.5\text{kg} \text{ or } 4\frac{1}{2} \text{ kg.}$$

ACTIVITY: Exercise 14d pages 230 and 231 of MK bk 4

LESSON 46

TOPIC : LENGTH, MASS AND CAPACITY

SUBTOPIC : Addition of kilograms and grams

CONTENT : Example

Add: Kg g
2 250

+ 3 150
5kg 400g

Example II

Add: 104kg 420g + 187kg 350

Kg g
104 420

+187 350
291 770

ACTIVITY: Exercise 14e page 231

LESSON 47

TOPIC : LENGTH, MASS AND CAPACITY

SUBTOPIC : Addition of kilograms and grams in word problems

CONTENT : Examples

Trevor's father weighs 53kg 550g and his mother weighs 46kg 850g. Find their total weight.

Kg g
53 550
+ 46 850
100 400
=====

ACTIVITY: Exercise 14g page 232

LESSON 48

TOPIC : LENGTH, MASS AND CAPACITY

SUBTOPIC : Subtraction of kilograms and grams

CONTENT : Examples

Subtract : Kg g
75 640
- 28 450
47 190

Subtract 59kg 423g – 39kg 651

Kg g
59 423
- 39 651
19 772

ACTIVITY: Exercise 14h page 234

LESSON 49**TOPIC : LENGTH, MASS AND CAPACITY****SUBTOPIC : Subtraction of kilograms and grams in word problems.****CONTENT :** Example

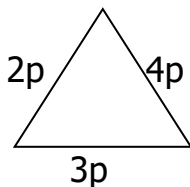
Babirye had 40kg 350g of ghee. She sold 26kg 850 of it. How much ghee did she remain with?

	Kg	g
She had	40	350
She sold	- 26	850
She remained with	<u>13</u>	<u>500</u>

ACTIVITY: Exercise 141 page 234 MK bk 4

LESSON 1**TOPIC : ALGEBRA****SUBTOPIC : addition of letters for numbers****CONTENT :** example I

- Add $m + m + m + m$
 $M+m+m+m = \underline{3m}$
- Simplify $2y + y + 3y$
 $2y+3y + y = \underline{6y}$
- Find the perimeter of the figure



$$\begin{aligned}
 P &= s+s+s \\
 &= 3p+4p+2p \\
 &= \underline{9p}
 \end{aligned}$$

Activity ☺Exercise 16 Mk bk 4 pg 250

LESSON 2:**TOPIC : ALGEBRA****SUBTOPIC : Subtraction of letters for numbers**

- Workout
 $3m - m$
 $3m - m = \underline{2m}$
- Simplify;
 $7y - 4y$
 $7y - 4y = \underline{3y}$

Activity: Exercise 5k pg 252 Mk 4 old edition

LESSON 3:**TOPIC : ALGEBRA****SUBTOPIC : collecting like terms involving addition only**

1. Collect like terms

$$\begin{aligned} \text{a) } 2k + 5m + k \\ (2k+k) + 5m \\ \underline{3k + 5m} \end{aligned}$$

$$\begin{aligned} \text{b) } 7x + 10y + 2x + y \\ 7x + 2x + 10y + y \\ \underline{9x + 11y} \end{aligned}$$

Activity: exercise 16 j Mk bk 4 pg 257 old edition

LESSON 4**TOPIC : ALGEBRA****SUBTOPIC : Equations with and without letters****CONTENT : Solving equations involving addition.**

Examples: (a)

$$\begin{aligned} \square + 3 &= 9 \\ \square + 3 - 3 &= 9 - 3 \\ \square &= 6 \end{aligned}$$

(b) $P + 5 =$

$P + 5 - 5 = 11 - 5$

$P = 6$

ACTIVITY: Exercise 16c and 16d MK bk 4 pg. 246 and 247

LESSON 5**TOPIC : ALGEBRA****SUBTOPIC : Solving equations involving subtraction****CONTENT : Finding the value of the unknown**

Examples: (a)

$$\begin{aligned} \square - 4 &= 6 \\ \square - 4 + 4 &= 6 + 4 \\ \square &= 10 \end{aligned}$$

(b) $y - 7 = 21$

$y - 7 + 7 = 21 + 7$

$y = 28$

ACTIVITY: Exercise 16e pg. 247

LESSON 6**TOPIC : ALGEBRA****SUBTOPIC : Adding letters for numbers****CONTENT :** Example:

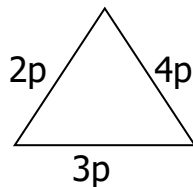
$$(a) \quad m + m + m = 3m \qquad (b) \quad x + x + x + x + x = 5x$$

ACTIVITY: Exercise 16f Mk Bk4 pg. 248

LESSON 7**TOPIC : ALGEBRA****SUBTOPIC : Collecting like terms****CONTENT :** Example:

$$(a) \quad 7x + 8x + x = 16x \qquad (b) \quad 5c + 4c + 3c = 12c$$

ACTIVITY: Exercise 16h Mk Bk4 pg. 250

LESSON 8**TOPIC : ALGEBRA****SUBTOPIC : Finding perimeter using unknowns****CONTENT :** Find the perimeter of this figure below:-

$$\begin{aligned} \text{Perimeter} &= s + s + s \\ &= 3p + 4p + 2p \\ \underline{\text{Perimeter} &= 9p} \end{aligned}$$

ACTIVITY: Exercise 16 MkBk 4 pg. 250

LESSON 9**TOPIC : ALGEBRA****SUBTOPIC : Collecting more like terms****CONTENT :** Example:

$$\begin{aligned} (a) \quad &\text{Collect like terms} \\ &= x + y + x + 3y + x \\ &= x + x + x + y + 3y \\ &= \underline{3x + 4y} \end{aligned}$$

$$\begin{aligned} (b) \quad &\text{Collect like terms} \\ &= 8b + 2p + 12b + 3p \\ &= (8b + 12b) + (2p + 3p) \\ &= \underline{20b + 5p} \end{aligned}$$

ACTIVITY: Exercise 16j Mk Bk4 pg. 251 and 252

LESSON 10**TOPIC : ALGEBRA****SUBTOPIC : Collecting like terms (addition and Subtraction)****CONTENT :** Example:

(a) Collect like terms

$$= 9d + 4c - 3c$$

$$= \underline{9d + c}$$

(b) Collect like terms

$$= 6a + a - m$$

$$= \underline{7a - m}$$

ACTIVITY: Exercise 5k page 252

LESSON 11**TOPIC : ALGEBRA****SUBTOPIC : SUBSTITUTION****CONTENT :** Example: (a) If $P = 3$ and $m = 6$, find the value of

$$(i) \quad P + 4 = 3 + 4$$

$$= 7$$

ACTIVITY: Exercise 16m Mk pg. 253

LESSON 12**TOPIC : ALGEBRA****SUBTOPIC : MORE SUBSTITUTION****CONTENT :** Examples: If $x = 3$, $y = 4$ and $z = 5$, Find the value:

$$(a) \quad = x + y + z$$

$$= 3 + 4 + 5$$

$$= \underline{12}$$

$$(b) \quad xyz$$

$$= x \times y \times z$$

$$= 3 \times 4 \times 5$$

$$= \underline{60}$$

ACTIVITY: Exercise 16n Mkbk 4 pg. 253

LESSON 13**TOPIC : ALGEBRA****SUBTOPIC : Solving equations involving addition****CONTENT :** Example:

$$(a) \quad \square + 3 = 9$$

$$\square + 3 - 3 = 9 - 3$$

$$\square = 6$$

$$(b) \quad 4 + y = 10$$

$$4 - 4 + y = 10 - 4$$

$$y = 6$$

ACTIVITY: Exercise 16d Mk bk4 page 247

LESSON 14**TOPIC :** ALGEBRA**SUBTOPIC :** Solving equations involving subtraction**CONTENT :** Example:

(a) $\square \times 3 = 5$

$- 3 \square = 5 + 3$

$\square = 8$

(b) $y - 4 = 7$

$y - 4 + 4 = 7 + 4$

$y = 11$

ACTIVITY: Exercise 16e Mk bk 4 page 247

LESSON 15**TOPIC :** ALGEBRA**SUBTOPIC :** Solving equations involving multiplication**CONTENT :** Examples.

(a) $3p = 21$

$\frac{3p}{3} = \frac{21}{3}$

(b) $13 \times \square = 26$

$\frac{\square}{13} = \frac{26}{13}$

$\square = 2$

LESSON 16**TOPIC :** ALGEBRA**SUBTOPIC :** Solving equations involving division**CONTENT :** Examples:

(a) $h \div 3 = 2$

$3 \times \frac{h}{3} = 2 \times 3$

$\underline{h = 6}$

(b) $\frac{y}{4} = 5$

$4 \times \frac{y}{4} = 5 \times 4$

$\underline{y = 20}$

ACTIVITY: Exercise 16r and 16s Mkbk 4 page 256

LESSON 17**TOPIC :** ALGEBRA**SUBTOPIC :** Forming and solving equations**CONTENT :** Addition and subtraction

Example:

(a) I think of a number, add 3 to it and the result is 14. What is the number? Let the number be n .

$n + 3 = 14$

$n + 3 - 3 = 14 - 3$

$$n = 11$$

\therefore The number is 11.

- (b) Think of a number, subtract 3 from it, my answer is 17. What is the number?

Let the number be y

$$y - 3 = 17$$

$$y - 3 + 3 = 17 + 3$$

$$y = 20 \qquad \therefore \text{the number is 20.}$$

ACTIVITY: Exercise 16t and 16u pages 257 and 258.

LESSON 18

TOPIC : ALGEBRA

SUBTOPIC : Forming and solving equations

CONTENT : Multiplication and division

Example:

There are 4 groups in a class. If each group has the same number of pupils, altogether there are 40 pupils. How many pupils are in each group?

Let the number of each group be n

$$4 \times n = 40$$

$$\frac{4n}{4} = \frac{40}{4}$$

$$\underline{n = 10 \qquad \therefore \text{10 pupils are in each group}}$$

ACTIVITY: Exercise 16v and 16w on pages 259 and 260

REMARKS