TOPICAL BREAKDOWN FOR P.4 MATHEMATICS 2017

UNIT	ITEM	BREAKDOWN
1.	**SETS concept**	• **definition of the term sets and elements** • Naming sets • Counting elements • Listing elements • Types of sets - Equivalent sets - Equal sets - Empty sets - Even and odd sets • Intersection sets • Union of sets • Shaded regions • Sets on venn diagrams • Difference of sets
2.	**NUMERATION SYSTEM AND PLACE VALUE**	- Place values (i) In words (ii) In figures - Values of whole - Expanding of numbers (i) Using place values (ii) Using values - Expanded numbers - Writing in figures and words - Rounding off numbers - Roman numerals
3.	**OPERATION NUMBERS**	• **Addition up to ten thousand.** (i) Without regrouping (ii) With regrouping (iii) Word problems • **Subtraction upto ten thousand** (i) Without regrouping (ii) With regrouping

		(iii) Word problems. • **Multiplication** (i) By one digit 1-9 (ii) By multiples of 10 (iii) Multiplication as repeated addition • **Division** (i) Long division without a remainder (ii) With a remainder (iii) As repeated subtraction • **Average of numbers**
4.	**NUMBER FACTS AND SEQUENCES**	• **Types of numbers** • Counting numbers • Whole numbers • Even and odd numbers • Prime numbers **Finding sum and difference of types of numbers** • **Number sequences** • By adding patterns • By subtracting patterns • **Multiples** • Common multiples • Lowest common multiples • Magic squares

SCHEME OF WORK FOR P.4 MATHEATICS TERM I 2017

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	Learner ; ▪ Identifies Group objects of a set. ▪ Draws objects. ▪ Identifies sets. ▪ Listing of members in a set	▪ Defines a set. ▪ Names of types of sets.	Guided discussion Demonstration Illustration Explanation	▪ Critical thinking ▪ Effective communi cation. ▪ 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** ▪ Equal sets and equivalent sets. ▪ Empty sets. ▪ Equivalent and non equivalent ▪ Even and odd sets	• States examples of different types of sets. • Identifies types of sets.	• Defines the types of sets. • Names the different types of sets. • Give oral examples of empty sets	Demonstration Explanation	▪ Creative thinking. ▪ Effective communi cation ▪ Critical thinking	▪ Real objects ▪ A chart	-Matching - Drawing -Naming sets -Listing members.	New MK primary MTC book 4 pg 1-5
	2		Intersectio n of sets	▪ Symbol for intersection. ▪ Drawing venn diagrams and shading. ▪ Listing members in the intersection. ▪ Number of elements in the intersection set.	▪ Writes the symbol for intersection. ▪ Draws venn diagrams. ▪ Shades the intersection. ▪ Lists members.	▪ 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 pg 9 - 11

2	1		Union and intersection of sets	▪ Symbol for union. ▪ Drawing, shading and listing of members in the union set. ▪ Number of elements in the union set.	▪ Writes the symbols for union sets . ▪ Draws venn diagrams. ▪ Shades the union set. ▪ Lists members in the union set.	▪ Defines a union set. ▪ Describes the shaded regions.	-Think pair share. -Guided discussion. -Demonstration	▪ Decision making. ▪ Effective communication ▪ creativity	▪ Real objects ▪ A chart	▪ Drawing and shading. ▪ Listing members in the union	MK Pri MTC bk. 4 pg. 13 - 15
2	1	**SETS CONCEPT**	Difference of sets	Inpterprete symbols and find (i) A - B (ii) B - A (iii) n(A-B) (iv) n(B-A)	▪ Interprets the concept of the difference of sets. ▪ Shades the regions. ▪ Draws the regions.	▪ Counts the numbers of members in; A – B B - A ▪ Describes the shaded parts.	▪ Guided discussion ▪ Demonstration ▪ Discovery ▪ Illustration	▪ Effective communication. ▪ Critical thinking. ▪ Creativity	▪ Real objects. ▪ A chart	▪ Drawing ▪ Shading ▪ Listing ▪ Counting	New MK primary MTC book 4 page 13-15
			Sub sets	▪ Number of members in a set. ▪ Listing members in a set. ▪ Listing subsets in a set.	▪ Lists members in a set. ▪ Writes the symbol of subject. ▪ Lists the subsets in a set.	▪ Defines a subset. ▪ Counts the number of subsets.	▪ Guided discussion. ▪ Demonstration. ▪ Discovery.	▪ Creativity. ▪ Effective communication. ▪ Critical thinking.	▪ Real objects ▪ A chart	▪ Listing ▪ Drawing ▪ Counting	New MK Primary MTC bk 4 pg. 21
		NUMBERATION SYSTEM AND PLACE VALUE	Place values	Reading and counting numbers Place values. (a) In words. (b) In figures. Example 4 5 6 3 Ones Tens Hundreds Thousands	• Identifies the place values. • Writes the place values.	• Read the place values in words and in figures. • Counts in tens from 10-200 • Names place values	▪ Guided discussion. ▪ Group illustration.	▪ Creative thinking. ▪ Effective communication. ▪ Decision making.	▪ Abacus ▪ Place value chart.	• 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.	Values of digits in numbers. Example 1 What is the value of each in the number 7 4 6 3 2 Tth Th H T O (2x1)=2 (3x10)=30 (6x100)=600 (4x1000)=4000 (7x10 000)=70 000	• Identifies the place values of digits. • Writes the place values on each digit. • Multiplies digits by their place values. • Writes the values.	• Reading values in words.	▪ Guided discovery ▪ Demonstration. ▪ Illustration.	▪ Creative thinking. ▪ Effective communication. ▪ Discussion making.	▪ Place value chart. ▪ Abacus.	▪ Identifying place values. ▪ Multiplying of digits by P.V. ▪ Writing values.	New MK Primary MTC Bk 4 pag 21.
		NUMBERATION SYSTEM	Expanding of numbers	Expanding of numbers ▪ Using place values ▪ Using values.	▪ Identifies place value. ▪ Writes the values. ▪ Writes in expanded form.	▪ Reads the place values. ▪ Reads the values.	▪ Illustration. ▪ Discovery ▪ Group work	▪ Effective communication. ▪ Logical thinking ▪ Decision making	▪ A place value chart.	-Identifying values. -Writing values. -Expanding numbers.	New MK primary MTC bk 4 pg 21.
3	1		Expanded numbers	What number has been expanded (7 x 1000) +(4 x 100 + (3x10) + (8 x 1)	▪ Multiplies the numbers correctly. ▪ Adds the numbers. ▪ Identifies the expanded number.	▪ Reads the figures. ▪ Reads the expanded number.	▪ Guided discovery. ▪ Group work. ▪ Illustration.	▪ Effective communication. ▪ Logical reasoning.	▪ Place value chart.	-Multiplying -Adding -Identifying	New MK primary MTC book 4 pg 24
	2		Writing words in	▪ Writing figures in words.	▪ Writes figures in words.	▪ Reads figures	▪ Explanation ▪ Guided	▪ Effective communicat	▪ Place value chart.	-Writing -Reading	New MK

		A N D P L A C E V A L U E	figures and vice versa	▪ Writing words in figures.	▪ Writes words in figures.	correctly. ▪ Reads words correctly.	discovery ▪ Discussion.	ion. ▪ Creative thinking. ▪ Logical reasoning.		-Arranging digits.	primary MTC bk 4 pgs. 22-23
			Rounding off of whole numbers	▪ Rounding off to the nearest tens. ▪ Rounding off to the nearest hundreds.	▪ Mentions the meaning of approximate. ▪ Rounds off numbers to the nearest tens / hundreds.	▪ Mentions the meaning of approximate. ▪ Reads the number given.	▪ Discovery ▪ Discussion ▪ Illustration	▪ 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	▪ Basic roman numerals. ▪ Roman numerals got by repeating x, c ▪ Roman numerals got by adding subtracting.	▪ Identifies roman numerals. ▪ Adds the Roman numerals. ▪ Subtracts the Roman numerals.	▪ Recites the roman numerals. ▪ Mentions the roman numerals obtained.	▪ Explanation ▪ Discussion ▪ Discovery.	▪ 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	▪ Changing from Hindu Arabic numerals to Roman numerals. ▪ Changing from Roman numerals to Hindu Arabic numerals. ▪ Word problems about Roman and Hindu Arabic	▪ Writes the Hindu Arabic numerals in Roman numerals. ▪ Writes the Hindu Arabic numerals correctly. ▪ Writes the Roman numerals in Hindu Arabic.	▪ Recites the roman numerals. ▪ Reads the statements given correctly.	▪ Explanation ▪ Discussion ▪ Discovery.	▪ 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.

				numerals.							
				▪ Addition and subtraction of roman numerals.	▪ Adds Roman numerals. ▪ Subtracts roman numerals.	▪ Reads the given word problem. ▪ Recites the Roman numerals.	▪ Guided discussion ▪ Illustration ▪ Discovery.	▪ Problem solving. ▪ Creative thinking. ▪ Logical thinking.		-Adding roman numerals. Subtracting roman numerals.	New MK Primary MTC bk 4 page 35 Oxford primary bk 4 page 67.
4	2	OPERATION ON NUMBERS	Adding up to ten thousand	Addition ▪ Without word problems. ▪ With word problems.	▪ Adds numbers without word problem correctly. ▪ Adds numbers with word problems correctly.	▪ Reads numbers in words. ▪ Interprets the word problem given.	▪ Explanation. ▪ Guided discussion. ▪ Guided discovery.	▪ Problem solving. ▪ Logical thinking. ▪ Creative thinking. ▪ Effective communication	▪ 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	▪ Subtraction. ▪ Without re-grouping. ▪ With re-grouping.	▪ Subtracts numbers without regrouping. ▪ Subtracts numbers with regrouping.	▪ Reads the numbers in words correctly. ▪ Uses the new words to make correct sentences	▪ Explanation. ▪ Guided discovery. ▪ Guided discussion.		▪ Flash cards showing numbers for subtraction ▪ Using abacus	Subtracting numbers with or without regrouping.	New MK primary MTC bk pages 42 – 43.
5	2	O P	Subtracting up to ten thousand	▪ Subtraction with regrouping.	▪ Subtracts numbers with regrouping. ▪ Arranges numbers according to their correct place values.	▪ Reads the numbers given in words. ▪ Arranges numbers according to their correct.	▪ Explanation. Guided discovery. ▪ Guided discussion	▪ Problem solving. ▪ Logical thinking. ▪ Creative thinking.	▪ Flash cards showing numbers for subtraction	Subtracting with regrouping.	New MK primary MTC bk 4 pg 43 - 44

	3	E R A T I O N O N N U M B E R S	Multiplication	**Multiplication** • By multiples of ten 90, 80. 70 … • Three digit figures by one digit. • Two digit figures by 2 digits. • Multiplication as repeated addition.	▪ Multiplies given problem. ▪ Identifies the multiples of ten.	▪ Reads the word problem. ▪ Recites the multiples of ten. ▪ Uses correct mathematical terms for multiplication e.g 2 multiplied by 3	▪ Explanation. Discussion ▪ Discovery. ▪ Rote method	▪ Creative thinking. ▪ Logical thinking. ▪ Problem solving.	▪ Counters. ▪ Multiplication table.	Multiplying numbers	New MK primary MTC bk 4 pages 46 - 51
6			Division	▪ Division as repeated subtraction. ▪ Without remainders.	▪ Divides numbers using repeated subtraction. ▪ Divides numbers using long division methods	▪ 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
				▪ Division with remainders. ▪ Division by 10s ▪ Word problems.	▪ Divides numbers using long division methods.	▪ Recites the multiplication table. ▪ Reads the word problems.	▪ Discussion. ▪ Guided discovery. ▪ Demonstration.			-Dividing numbers using long division. - Multiplying. Subtracting	New MK Primary MTC Bk 4 pages 53 – 55.
			Division	▪ Division as repeated subtraction ▪ Without remainders	▪ Divides numbers using repeated subtraction ▪ Divides numbers using long division methods	▪ Counts the number of times a number has been subtracted	▪	▪	▪ Counters ▪ Flash cards ▪ Real objects	Counting numbers that have been divided	New MK pri mtc bk 4 pg 52-55

			Average	▪ Average without word problem. ▪ With word problem.	▪ Solves the number given. ▪ Adds numbers. ▪ Divides the number correctly.	▪ Reads the number or digits given. ▪ Reads the statement given.	▪ Explanation. ▪ Guided discussion. ▪ Discovery.	▪ Problem solving. ▪ Critical thinking. ▪ Discussion making.	▪ Counters in bundles.	Finding the average.	New MK Pr. MTC bk5 pg. 76 - 77
		NUMBER FACTS AND SEQUENC	Types of numbers	<u>Types of numbers</u> ▪ Counting numbers. ▪ Whole numbers. ▪ Even numbers ▪ Odd numbers.	▪ Identifies the types of numbers. ▪ Finds the missing numbers.	▪ Recites the numbers. ▪ Counts numbers correctly.	▪ Explanation. ▪ Guided discussion. ▪ Discovery.	▪ 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 ▪ By adding numbers like 2, 4, 6, … ▪ By subtracting numbers like 6, 4, 2……	▪ Identifies the next numbers by adding. ▪ Identifies the next number by subtracting.	▪ Counts numbers. ▪ Mentions the next number in the sequence.			▪ Chart showing number sequences.	Finding the next number in the sequences.	New MK Pr. MTC bk 4 pages 61 – 62
7	1			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		Multiples	**Multiples** ▪ Listing multiples of given numbers. ▪ Common multiples. ▪ Lowest common multiples. ▪ Counting in tens, hundreds and thousands.	▪ 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

		E S		▪ Multiplying by 10, 100 and 1000. ▪ Multiplying by multiples of 10. ▪ Divide by 10		.					
7	4	Number facts and sequences	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 Understanding MTC bk 4 pg 88.

LESSON NOTES FOR MATHEMATICS P.4 TERM I 2017

LESSON 1

TOPIC I: SET CONCEPTS

SUB TOPIC: REVISION OF SETS

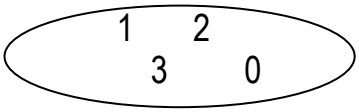
CONTENT: Definition

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.

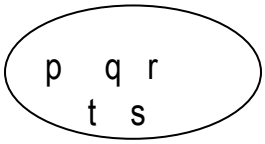
K



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
∴ n(B) = 5 members

X = {r, s, t} set X has 3 members
Therefore n(x) = 3 members.

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

Remarks.

LESSON 2: CONTENT: Equivalent and non-equivalent sets.

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

Symbol ⟷

Example.

M = (1, 2, 3, 4) N= (a, e,i, o)

Set M is equivalent to set N

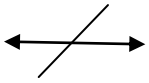
Or M ⟷ N

Note: Equivalent sets are also called matching sets.

Non – Equivalent sets

These are sets which do not have the same number of members.

Symbol



Example

P = {a, b, c} Q = {p, q, u, s}

Set P and Q are non – equivalent, non matching sets.

Activity: Exercise 1 (MK New edition) page 6.

Remarks.

LESSON 3:

TOPIC: SET CONCEPTS

SUB-TOPIC: TYPES OF SETS

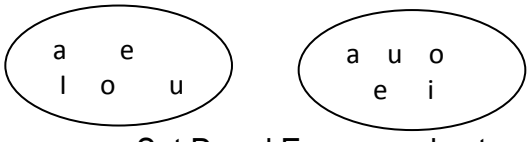
CONTENT: EQUAL SETS AND EQUIVALENT SETS

Equal sets:

Equal sets are sets which have the same number of elements which are exactly the same.

Examples:

D E



Symbol =

Set D and E are equal sets

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 ⟷

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

LESSON 4:

CONTENT: EMPTY SETS

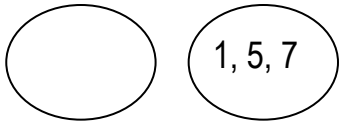
Empty sets are sets which do not have members or a set whose members cannot be found.

NB: Empty sets are also called "Null sets"

Symbol ∅ or ( )

Examples

(a) R S



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)

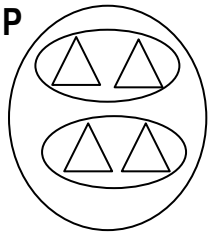
Remarks.

LESSON 5:

CONTENT: Even and Odd sets.

Even sets are sets whose members can all be paired

Example:



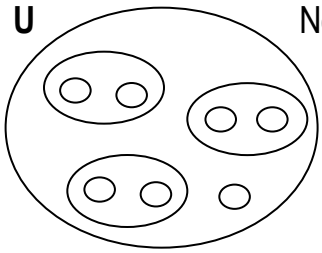
Set P has 4 members.
Members of set P have all been paired, therefore it is an even sets.

Note: An empty set is an even set.

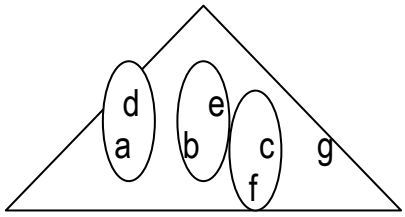
Odd sets

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

Example:



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) **q** = (a, e, i, o ,u)

Find (i) $P \cap Q. = (a, e)$

$n (P \cap Q) = 2$ element

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

Examples

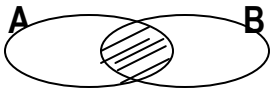
W = (1, 2, 3, 4) N = (a, b, c)

Set W and N are non – intersecting sets.

Drawing venn diagrams and shading the intersection.

Example:-

- Shading the intersection set.



A ∩ B is shaded.

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:

∴ U ∩ V = {1, 3, 5}

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

Set E = {f, g, r, p}

∴ D ∩ E = {p, r}

Number of elements in the intersection

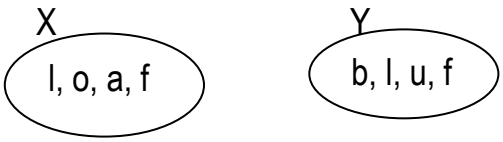
Examples:

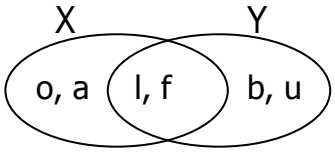
Set S = (g, o, a, t) T = (r, ø, t)

S ∩ T = (o, t) Therefore; number of elements in the intersection set are 2.

n(S∩T) = 2 elements

Set





$X \cap Y = (l, f)$

$\therefore n(X \cap Y) = 2$ 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)

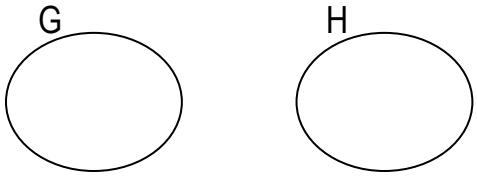
What is P U Q?

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

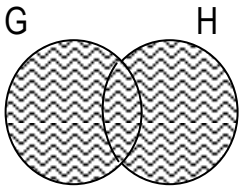
N.B: All common members are written once.

Drawing venn diagrams and shading.

Examples:

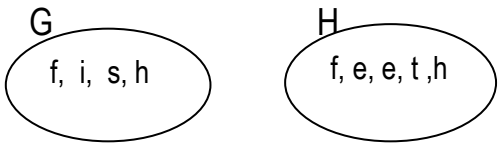


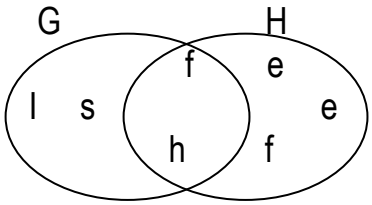
Shade $G \cup H$



Listing members of the union set

Example:





$G \cup H = (i, s, f, h, e, e, t)$

$\therefore$ Number of elements in the union set are 7

<u>n(G∪H) = 7 elements.</u>

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 = $\{1, 3, 5\}$

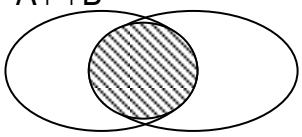
(ii) Set B only = $\{0, 6, 8\}$

Members of set A only is represented by A – B

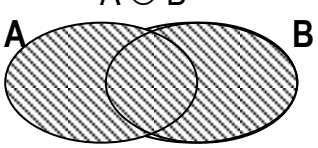
Members of set B only is shown as B – A

Showing the difference of sets on venn diagrams.

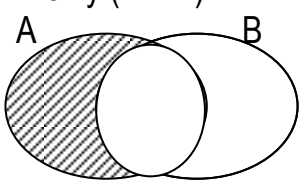
$A \cap B$



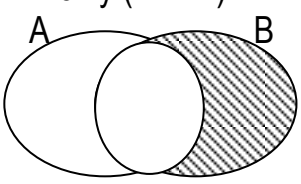
$A \cup B$



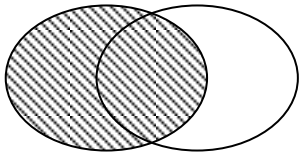
A only (A – B)



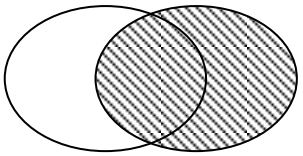
B only (B – A)



Set A



Set B



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:

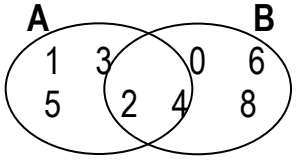
CONTENT: PUTTING SETS ON A VENN DIAGRAM

Examples:

X = (1, 2, 3, 4, 5)

Y = (0, 2, 4, 6, 8)

Represent the two sets on a venn diagram.



List members of

X only = $\{1, 3, 5\}$

Y – X = $\{0, 6, 8\}$

$X \cap Y = \{2, 4\}$

ACTIVITY

Set 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).

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 },

REMARKS

LESSON 12

TOPIC : NUMERATION SYSTEMS AND PLACE VALUES

SUB TOPIC: PLACE VALUES

(1) In words

Example

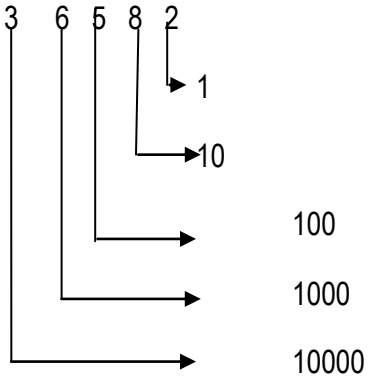
MK Primary Mathematics book 4 (Old Edition)
Exercise 2b page 20.

(i) 4 5 6 3

Ones
Tens
Hundreds
Thousands

In figures

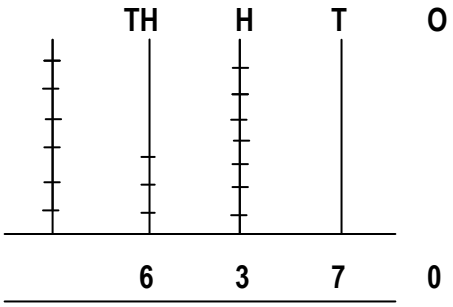
(ii)



(iii) Representing numbers on abacus.

Example

6 3 7 0



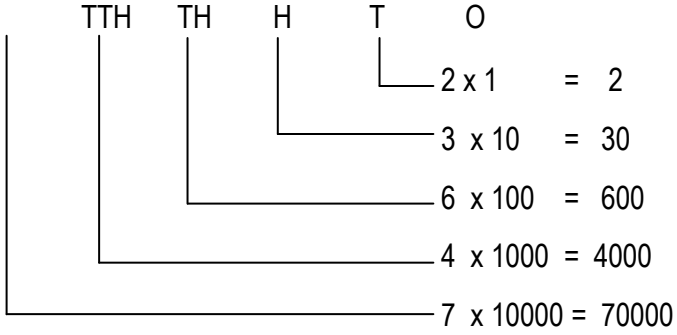
LESSON 13

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

TH H T O
3 1 5 9
└──────── 5 x 10 50

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

1
10
100
1000

(3 X 1000) + (7 X 100) + (4 X 10) + (6 X 1)

Example 2
Expand 623 using place values

H	T	O
6	2	3

1
10
100

6 Hundreds + 2 Tens + 3 Ones

ACTIVITY
MK Primary Mathematics Book 4 page 24
Exercise 2f

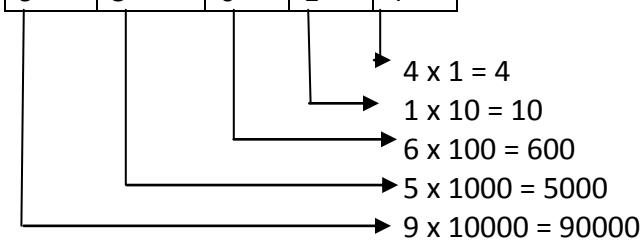
LESSON 15

EXPANDING NUMBERS USING VALUES

Example

Expand 95614 using its values

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



∴ 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 x 1000) + (4 x 100) + (3 x 10) + (8 x 1)
7000 + 400 + 30 + 8
= 7438

7000
400
+ 30
8
7438

(b) What number has been expanded to give
(2 x 10000) + (3 x 1000) + (2 x 10) + (1 x 1)
20000 + 3000 + 20 + 1
= 23021

20000
3000
20
+ 1
23021

ACTIVITY

What number has been expanded.

(i) 500 + 70 + 2

(ii) 3000 + 400 + 90 + 2

(iii) (1 x 10,000) + (6 x 100) + (8 x 10) + (3 x 1)

(iv) (7 x 1000) + (9x 100) + (4 x 1)

(v) 5000 + 70 + 8

REMARKS.

LESSON 17

SUB TOPIC : WRITING FIGURES IN WORDS

CONTENT : Example:

(i) Write 4 3 2 6 in words

TH	H	T	O
4	3	2	6

Forty thousand three hundred twenty six

(ii) Write 65702 in words

TTH	TH	H	T	O
6	6	0	6	2

Sixty five thousand seven hundred two.

ACTIVITY

MK Primary Mathematics (old edition) page 21 – 22

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

2 x 1 = 2

7 x 10 = 70

4 x 100 = 400

12 x 100 = 12000

12000
400
70
+ 2
12472

ACTIVITY

MK Primary Mathematics (old edition) page 22

Exercise 2e

REMARKS.

LESSON 19

SUB TOPIC : ROUNDING OFF TO THE NEAREST TENS

Examples

(a) Round off 92 to the nearest tens

T	O
9	2
+ 0	0
9	0

ACTIVITY

MK Primary Mathematics Bk 5 (Old edition) page 55

REMARKS

(b) 4 3 6

H	T	O
4	3	6
+		1
4	4	0

62.01

T	O	Ths	Hundredths
6	2	0	1
0			
+ 6	0		

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

ACTIVITY

MK Primary Mathematics Bk 5 (Old edition) page 55

REMARKS

(c) Round off 1245 to the nearest hundreds

TH	H	T	O
1	2	4	5
+	0	0	0
1	2	0	0

LESSON : 21

TOPIC : NUMERATION SYSTEM AND PLACE VALUE

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 = 20 = 10 + 10 = XX

3 = I + I + I = III = 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:

(a) 19 = 10 + 9
X + IX
= XIX

(b) 44 = 40 + 4
XL + IV
= XLIV

Activity: Mk Primary Mathematics (New Edition book 5 page 34.

Changing roman numerals into hindu Arabic numerals.

Example 1

XIV = X + IV
= 10 + 4

XIV = 14

Example 2

Change XXXIX to Hindu Arabic

XXXIX = XXX + IX
30 + 9
XXXIX = 39

ACTIVITY: MK primary mathematics book 4 (New Edition) page 34.

LESSON : 23

SUB TOPIC : WORD PROBLEMS INVOLVING ROMAN AND HINDU ARABI NUMERALS

Example:

(a) Henrys' 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 35

LESSON 24

SUBTOPIC : ADDITION OF ROMAN NUMERALS

Examples

i) IX + V
= 9 + 5
= 14

(ii) 14 = 10 + 4
= X + IV
= XIV

iii) XX + VII
= 20 + 7
= 27

(iv) 29 = 20 + 9
= XX + IX
= XXIX

v) Find the sum of IV and XXV

Subtraction of Roman numerals

Examples

a) XXXVI - XXII
= 30 + 6 - 20 + 2
36 – 22
14

(b) 14 = 10 + 4
= X + IV
= XIV

(c) IX - V
= 9 - 5
= 4

(d) 45 = 40 + 5
XL + V
= XLIV

c) Subtract XII from XXIX

ACTIVITY :

Example 1

(a) XXXIV + XLV

(b) XV + XXIX

(c) XCII + XL

(d) XXV – V

(e) XXIV – XVI

(f) XLIX – XII

Example 2

There are XXIV boys and XIX girls in the class.

a) Fin the total number of pupils in the class

b) How many more boys than girls are in the class?

LESSON 25

TOPIC : OPERATION ON 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
	11	8	8	9

2. Add: 4622 + 5043 + 6231

	TH	H	T	O
	4	6	2	2
	5	0	4	3
+	6	2	3	1
	15	8	9	6

ACTIVITY : MK Primary 4 book page 38 exercise 39 (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
	1	9	6	7

- 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
	1	6	9	8	2

ACTIVITY: MK Primary mathematics (New Edition) book 4 page 39. Exercise 3b
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	=	578 books
Both carried	=	927 books

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	3500
Total Expenditure	sh.	19,300

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. 40
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
	0	5	4

- 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
	2	7	6

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

ACTIVITY: Exercise 3d (MK primary book four page 42 (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
	7	**1**	**2**	**8**

(ii) 24035 - 3727

TTH	TH	H	T	O
2	4	0	3	5
-	3	7	2	7
2	**0**	**3**	**0**	**8**

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?

```
  2 4 3
- 3 7
-------
  2 0 6
```

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

Katabula had - 2500
He paid - 350
His 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

LESSON: 31
TOPIC: OPERATION ON 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)
$$\begin{array}{r} 1\ 0 \\ \times\ 2 \\ \hline 2\ 0 \end{array}$$

(iii)
$$\begin{array}{r} 4\ 3 \\ \times\ 4 \\ \hline 1\ 7\ 2 \end{array}$$

(iv)
$$\begin{array}{r} 1\ 4 \\ \times\ 8 \\ \hline 1\ 1\ 2 \end{array}$$

ACTIVITY: New Edition MK Primary Mathematics bk 4 page 46

REMARKS:

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
x 7
Shs. 4 8 7 2 0

∴ He gets 48, 720 in 7 days.

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) $4 \times 2 = 2 + 2 + 2 + 2$
$= 8$

(b) $3 + 3 + 3 + 3 = 4 \times 3$
$= 12$

ACTIVITY:

Use repeated addition to multiply the following:-

(i) 3 x 2

(ii) 6 x 4

(iii) 4 x 3

(iv) 5 x 3

(v) 8 x 2

Complete

a) 2 + 2 + 2 + 2 = _____ x _____

b) 4 + 4 + 4 + 4 =_____x _____

c) 3 + 3 + 3 + 3 + 3 _____x _____

d) 8 + 8 = _____ x _____

e) 9 + 9 + 9 = _____ x _____

REMARKS

LESSON 34

SUB TOPIC : DIVISION

CONTENT : DIVISION AS REPEATED SUBTRACTION

Example

1. 12 ÷ 3 = 12 – 3 = 9
   9 - 3 = 6
   6 - 3 = 3
   3 - 3 = 0

count the number of times you subtract 3 division from the dividend until you get "o" is the answer

∴ 12 ÷3 = 4 times

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

LESSON 35

TOPIC : OPERATION ON NUMBERS

SUB TOPIC : DIVISION WITHOUT REMAINDER

CONTENT:

Example 1: Divide 4804 by 4.

```
        1201
    √4 8 0 4
1 x 4 = 4
      0 8
2 x 4 = 0 8
        0
        0
          4
1 x 4 =   4
```

Example 2: 124 ÷ 4

```
      31
   √1 2 4
3 x 4 = 1 2
          4
1 x 4 =   4
```

ACTIVITY: Exercise 3m page 53 (Mk New Edition).
Exercise 3:16 understanding MTc bk pg 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:

```
      060
   2 ) 1 2 0
 0 x 2 = 0
       1 2
 6 x 2 = 1 2
           0
 0 x 2 =   0
```

Each bag has 60 oranges

Example 2
Divide 246 text books among 3 classes

```
      082
   3 ) 2 4 6
 0 x 3 = 0
       2 4
 8 x 3 = 2 4
           6
 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.

```
      07629
   5 ) 3 8 1 4 8
 1 x 3 = 0
       3 8
 2 x 4 = 0 8
       3 8
 7 x 5 = 3 5
         3 1
 6 x 5 = 3 0
           1 4
 2 x 5 = 1 0
             4 8
 9 x 5 =   4 5
             3
```

∴ 38148 ÷ 5 = 7629 rem 3

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 =

LESSON : 36

SUB-TOPIC : DIVISION BY 10

Example:

(i) $650 \div 10$

$= \frac{65\cancel{0}}{1\cancel{0}}$

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

(ii) $420 \div 10$

$= \frac{420}{10}$

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

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

ACTIVITY :

(i) $200 \div 10 =$
(ii) $370 \div 10 =$
(iii) $810 \div 10 =$
(iv) $340 \div 10 =$
(v) $640 \div 10 =$
(vi) $280 \div 10 =$
(vii) $480 \div 10 =$
(viii) $560 \div 10 =$

REMARKS

LESSON 39

SUB-TOPIC : AVERAGE

Finding average or mean of numbers

Examples

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

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

(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.

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

$= \frac{27\,years}{3} = 9$ years

ACTIVITY:

A new MK primary mathematics book 5 page 76 – 77

LESSON 39

TOPIC : NUMBER 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.

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, 7, 9 are odd numbers.

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 $\{0, 2, 4, 6\}$

   Sum = 0 + 2 + 4 + 6

   Sum = 12

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

   = $\{0, 2^{nd}, 4, 6^{th}\}$

   Difference = 6 - 2

   Difference = 4

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

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

   Product = 0 x 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

7

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

$\overset{3^{rd}}{}\ \overset{4^{th}}{}$

Odd numbers = {1, 3, 5, 7, 9, 11, 13, 15}

Product = 5 x 7

= 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:

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, 4, 5, 6, 7, 8, 9

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

LESSON 44

TOPIC: NUMBER 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 = 11

11 + 2 = 13

The missing numbers are 11 and 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 = 10

The missing number is 10

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:

(i) 8, 6, 4, 2

-2 -2 -2

(ii) 20, 18 15, 13,10, 8, 5

-2 -3 -2 -3 -2 -3

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 x 2 = 8, and 8 is a multiple of 4.

(i) List multiples of 4

1 x 4 = 4

2 x 4 = 8

3 x 4 = 12

4 x 4 = 16

5 x 4 = 20

6 x 4 = 24

{4, 8, 12, 20, 24, …….}

(ii) List multiples of 5

1 x 5 = 5

2 x 5 = 10

3 x 5 = 15

4 x 5 = 20

5 x 5 = 25

6 x 5 = 30

5, 10, 15, 20, 25, 30, …..}

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,…}

M_4 = {4, 8, 12, 16, 20, 24……}
Common multiples = { 4, 8, 12, 16}

2. Find the L.C.M of 4 and 5
M_4 = {4, 8, 12, 16, 20, 24, 28}
M_5 = {5, 10, 15, 20, 25, 30, …..}
Common multiples = { 20}'
∴ 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

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

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 x 10 = 60

(ii) 7 x 100 = 700

(iii) 8 x 1000 = 8000

(iv) 38 x 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 x 30?

7 x 30 = ?

30 = 3 x 10

So 7 x 30 = 7 x 3 x 10

= 21 x 10

= 210

Example (ii)

What is 50 x 30?

50 x 30 = 5 x 10 x 3 x 10

= 5 x 3 x 10 x 10

= 15 x 100

= 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.=_____

SCHEME OF WORK FOR P.4 MATHEATICS TERM II 2017

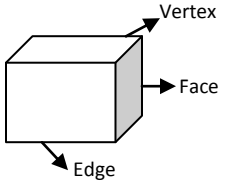
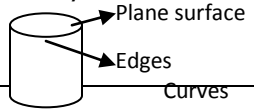
WK	PD	THEME	SUB THEME	CONTENT	SUBJECT COMPETECIES	LANGUAGE COMPETENCIES	METHODS	LIFE SKILL	T/L AIDS	T/L ACTS	REF
		F R A C T I O N S	Revision	Fractions (Lower work) • Definition. • Shading / Naming fractions. • Writing fractions in words and figures. • Types of fractions.	▪ Defines fractions. ▪ Shades the given fractions ▪ Gives examples of fractions.	▪ Defines fractions. ▪ Names the types of fractions.	▪ Explanation ▪ Demonstration. ▪ Guided discovery	▪ Effective communication. ▪ Creativity.	▪ 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	• Equivalent fractions. • How to get equivalent. • Finding missing parts of fractions. • Reduce fractions of atleast one factor • Compare Fractions. • Ordering simple fractions.	• Multiples and dives. • Compares fractions. • Reduces fractions to lowest term. • Identifying simple equivalent fractions using diagrams	• Describes and names equivalent fractions. • Writes equivalent fractions.	• Group discussion. • Question and answer.	▪ Problem solving. ▪ Effective communication. ▪ Critical thinking.	▪ Flash cards. ▪ Charts showing fractions	Cutting Shading	MK primary MTC bk 4 pg 82 - 86
			Operations on fractions	**<u>Addition of fractions</u>** • With same denominators. • With different denominators. **<u>Subtraction of fractions</u>** • With same	▪ Adds fractions with same and different denominators. ▪ Subtracts fractions with same and different denominators.	▪ Reads fractions given	▪ Demonstration. ▪ Illustration. ▪ Group discussion.	▪ Effective communication. ▪ Critical thinking ▪ Creativity.	▪ Pupils chart showing fractions.	▪ Cutting. ▪ Grouping ▪ Reading	New MK Bk 4 Pg. 87-97.

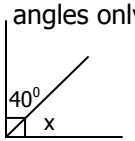
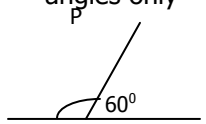
				denominators. • With different denominators. •							
		F R A C T I O N S		**Writing mixed as proper fraction** ▪ Changing improper fractions to mixed numbers. **Addition of mixed numbers** ▪ With same denominators only **Subtraction of mixed numbers.** ▪ With same denominators only **Fractions of a group** ▪ What is ½ of 6? ▪ Find the remaining fractions. **Application of fractions** ▪ Multiplication of fractions.	▪ Changes mixed numbers to improper fractions. ▪ Adds and subtracts mixed fractions. ▪ Uses fractions of a group to apply in given numbers.	▪ Reads fractions. ▪ Defines the type of fractions.	▪ Demonstration on on. ▪ Guided discovery. ▪ Explanation.	▪ Creativity. ▪ Logical reasoning.	▪ Real objects like text books.	▪ Cutting ▪ Grouping ▪ Reading	New MK Bk. 4 Pg. 87 - 97
2	1		Decimals	**Decimal fractions** ▪ Writing decmals -in words -in figures upto tenths ▪ Expressing fractions as decimals upto thenths ▪ Expressing decimals as fractions up to thenths ▪ Place values of	▪ 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	▪ Uses the word decimals in problems "point"	▪ Guided discovery. ▪ Think pair share. ▪ Demonstration. ▪ Illustration.	▪ Effective communication. ▪ Creative thinking. ▪ Problem solving.	▪ Abacus. ▪ Flash cards.	▪ Collecting objects like bottle tops. ▪ Cutting.	New MK primary MTC book 4 pages 98 - 111

				decimals upto thenths **Subtraction of decimals upto tenths**	versa. ▪ Subtract decimal fractions upto tenths.						
				Ordering decimals.	▪ Interpret word problems.						
		2-DIMENSIONAL GEOMETR	Identifying 2 – dimensional figures	**Plane shapes** Examples: ▪ Rectangles. ▪ Circle ▪ Rhombus ▪ Oval ▪ Square ▪ Kite ▪ Trapezium ▪ Triangle ▪ Parallegrams etc.	1. Identifies plane shapes. 2. Draws given shapes. 3. Writes the properties of shapes.	▪ Describes and names shapes of 2 – dimensional figures. ▪ States the properties of the shapes.	▪ Demonstration. ▪ Explanation ▪ Discussion.	▪ Effective communication. ▪ Logical reasoning. ▪ Creativity	▪ Objects with such shapes e.g. balls, baskets, cups, eggs etc.	• Identifying • Drawing • shaping	New MK Bk. 4 pg. 125. MK pupils Bk. 3 pg. 126
			Drawing ling segments	Drawing and measuring line segments. Example. End point End point 5cm	• Draws line segments. • Measures line segments	• Uses the word "segment" • Make correct sentences	▪ Illustration. ▪ Demonstration. ▪ Explanation	▪ Logical reasoning. ▪ Creativity. ▪ Effective communication.	▪ Dividers. ▪ Pencil. ▪ Rules etc	▪ Drawing ▪ Measuring	A new MK Bk. 4 Pg. 142.
			Drawing and measuring angles	▪ Drawing angles using a protractor. ▪ Measuring ∠s using a protractor e.g.	▪ Draws angles using a protractor. ▪ Measuring angles using a protractor.	▪ Uses the word "Protractor" ▪ "Angles" etc	▪ Demonstration. ▪ Guided discovery. ▪ Explanation.	▪ Effective communication. ▪ Logical reasoning. ▪ Accuracy.	▪ Rulers. ▪ Protractor ▪ Dividers.	▪ Drawing. ▪ Measuring.	New Mk Bk 4 Pg. 143.

		Y		50^0, 30^0, 60^0, 90^0 not exceeding 90^0			▪ Illustration				
3	1		Constructing squares, rectangle and equilateral triangles	1. Constructing squares and rectangles using a protractor when given sides.	▪ Constructs squares, rectangles, using a protractor.	▪ Describes ▪ dentifies and names the instruments for construction	▪ Demonstration. ▪ Explanation	▪ Effective communication. ▪ Critical thinking. ▪ Logical reasoning.	▪ Protractors. ▪ Dividers ▪ Rulers ▪ Pencils ▪ Pair of compass	▪ Drawing ▪ Constructing. ▪ Measuring.	
		2-DIMENSIONAL GEOME		2. Constructing equilateral triangles when given sides using a pair of compasses only.	▪ 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	▪ Drawing and recognising right angles.	▪ Recognizes right angles. ▪ Draws right angles using a protractor only.	▪ Points out and names right angles in the class room and in the play ground.	▪ Explanation. ▪ Illustration. ▪ Guided discovery. ▪	▪ Logical reasoning. ▪ Creative thinking. ▪ Effective communication.	▪ Protractors. ▪ Dividers. ▪ Rulers ▪ Pair of compasses.	-Drawing. -Identifying -Constructing. -Measure.	New MK pupils bk 4 Pg. 144.
			Perimeter	1. Finding perimeter when given sides e.g ▪ Squares ▪ Rectangles ▪ Triangles.	▪ Finds perimeter of squares, rectangles and triangles when given sides.	▪ Explains the meaning of perimeter. ▪ Illustrates	▪ Illustration. ▪ Demonstration ▪ Explanation.	▪ Critical thinking. ▪ Effective communication. ▪ Logical	▪ Cuts of squares, rectangles and triangle.	▪ Drawing shapes. ▪ Finding missing side.	New MK Bk 4 Pg. 204

		T R Y				perimeter of figures in exercise books.		thinking.			
	4		Area	▪ Finding area of square and rectangles and when given sides. ▪	▪ Finds area by both counting and using formular ▪ .	▪ Explains the meaning of area. ▪ Finds the area.	▪ Explanation ▪ Demonstration. ▪ Guided discovery.	▪ Critical thinking. ▪ Problem solving. ▪ Effective communication. ▪	▪ 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** ▪ Using hard paper. ▪ Using strings. ▪ Using the big toe. ▪ Using a pair of compasses.	▪ Makes circles using hard papers and toes. ▪ Uses a pair of compasses to draw circles.	▪ Identifies names and uses both strings and hard papers to make circles.	▪ Demonstration. ▪ Explanation. ▪ Discussion	▪ Critical thinking. ▪ Problem solving. ▪ Creativity.	▪ Strings. ▪ Hard papers.	Making and drawing circles.	New MK Bk. 4 Pg. 134.
			Parts of a circle	Naming parts of a circle. Example. ▪ Diameter ▪ Radius ▪ Chord ▪ Circumference	1. Names the parts of a circle.	▪ Identifies names and uses the words like radius Diameter	▪ Explanation. ▪ Illustration ▪ Demonstration ▪ Guided discovery.	▪ Logical reasoning. ▪ Creativity. ▪ Effective communication	▪ Cutouts. ▪ Chart showing parts of a circle.	▪ 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.	▪ Finds diameter. ▪ Measures diameter. ▪ Finds radius ▪ Measures radius.	▪ Explains and uses / relates polygons as used in our daily life.	▪ Explanation. ▪ Discussion. ▪ Question and answer.	▪ Logical reasoning. ▪ Critical thinking. ▪ Creativity.	▪ Real objects. ▪ Cut outs. ▪ Strings ▪ Rulers.	▪ Relating parts of a circle. ▪ Finding length of diameter and radius.	Mk Bk. 4 Pg. 139-140

		M E T R Y	Polygons	▪ Drawing and naming some polygons ▪ Triangles ▪ Square ▪ Rectangle ▪ Pentagon – five sides. ▪ Hexagon – Six sides.	▪ Identify and names the polygons.	▪ Explains and uses / relates polygons as used in our daily life.	▪ Explanation. ▪ Discussion. ▪ Question and answer.	▪ Logical reasoning. ▪ Creativity. ▪ Effective communication.	▪ Cut outs. ▪ Real objects etc.	-Identifying. -Naming reading	reperto ire
		3 – D I M E N S I O N A L F I G U R E S / G E O	3-dimensional geometry Identification.	Identifying and naming 3 – dimensional figures. Example ▪ Cone ▪ Cylinder ▪ Cube ▪ Cuboid ▪ Triangular pyramid etc.	▪ Identifying 3 – dimensional figures. ▪ Naming 3-dimensional figure. ▪ Drawing 3 – dimensional figures.	▪ Names and indentifies common solids in English and mother tongues.	▪ Explanation. ▪ Illustration ▪ Discovery. ▪ Question and answer.	▪ Creative thinking. ▪ Logical reasoning. ▪ Effective communication.	▪ Models. ▪ Cutouts. ▪ Real objects of such shapes.	Drawing and naming.	New Mk Bk 4 Pg. 128.
			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  	▪ Identifies and labels, faces, edges and vertices. ▪ Counts the number of faces, edges and vertices.	▪ Identifies names and uses words like; edges, vertices and faces in our daily life.	▪ Explanation ▪ Denomination ▪ Illustration ▪ Guided discovery	▪ Critical thinking. ▪ Effective communication ▪ Creativity.	▪ 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							
		3 DIMENSIONAL GEOMETRY	Angles	**Types of angles** 1. Right angles (Complementary angles of 2 angles only  $X + 40^0 = 90^0$ $X+40^0-40^0 = 90^0- 40^0$ $X = 50^0$ 2. Straight angles (Supplementary angles of 2 angles only  $P + 60^0 = 180^0$ $P+60^0-60^0=180^0-60^0$ $P = 120^0$	1. Identify the different types of angles. 2. Find the complement and supplement of angles.	▪ Explains the meaning of complement + and supplement nt angles.	▪ Explanation. ▪ Question and answer. ▪ Discussion ▪ Demonstration ▪ Illustration	▪ Problem solving. ▪ Logical reasoning. ▪ Effective communication	▪ Cut outs. ▪ Text books ▪ Illustration ▪ Chalkboard	▪ Identifying angles ▪ Finding missing numbers	New MK primary MTC bk 4 pg.
		DATA HANDLING	Pictograph Bar graph Line graphs	▪ Interpretation. ▪ Drawing ▪ Interpretation Drawing ▪ Interpretation Drawing	▪ Uses tally marks to collect and group data. ▪ Organizes data.	▪ Counts objects / people. ▪ Records. ▪ Describes	▪ Explanation. ▪ Question and answer. ▪ Illustration. ▪ Discussion.	▪ Effective communication. ▪ Logical thinking.	▪ Real objects e.g. ▪ Straws books. ▪ Pens	▪ Counts tally marks. ▪ Growing using	New MK MTC Primary Bk 5 Pg. 115

			Tallies	▪ Interpretation Drawing	▪ Displays data. ▪ Interprets data.	graphs. ▪ Explains graphs.	▪ Demonstration.	▪ Creative thinking. ▪ Problem solving.	▪ Bottle tops.	tallies. ▪ Drawing ▪ Reading ▪ Interpreting. ▪ Displaying ▪ Collecting ▪ Writing.	– 123. Mk Old Edition P/S Bk 5 Pg.

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 $1\frac{2}{3}$

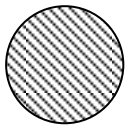
2 is the numerator

3 is the denominator

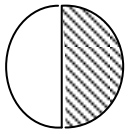
1 is the whole number

3. Names of fractions

Naming and shading fractions and writing in words.



1 a whole

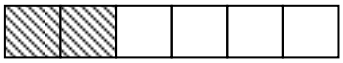


$\frac{1}{2}$ a half

$\frac{2}{8}$ 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: $\frac{2}{3}$

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

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

ACTIVITY: List the first 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

Example: (a) $\frac{1}{2} = \frac{\square}{6}$

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

(b) $\frac{3}{5} = \frac{\square}{20}$

$\therefore \frac{3}{5} = \frac{12}{20}$

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

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

$\frac{3}{5} \times \frac{2}{2} = \frac{6}{10}$

$\frac{3}{5} \times \frac{3}{3} = \frac{9}{15}$

$\frac{3}{5} \times \frac{4}{4} = \frac{12}{20}$

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

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

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

(b) Write $\frac{3}{9}$ to its lowest terms

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

$F_3 = \{ 1, ③ \}$

$F_9 = \{ 1, ③, 9 \}$

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 $\frac{1}{2}$?

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

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

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

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

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

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

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

$\therefore$ $\frac{1}{2}, \frac{2}{3}, \frac{1}{6}$ 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.

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

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

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

$\therefore$ $\frac{1}{3}, \frac{1}{2}, \frac{1}{5}$ 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:

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

Example II

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

ACTIVITY: Exercise 51 page 89.

LESSON 10

TOPIC : FRACTIONS

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

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

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

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

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

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

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

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.

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

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

$\frac{9}{12} + \frac{8}{12} = \frac{9+8}{12} = \frac{17}{12}$

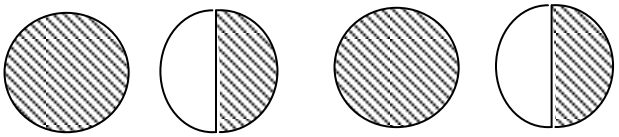
ACTIVITY: Exercise 50 page 95 old edited Mk bk 4

LESSON 13

TOPIC : FRACTIONS

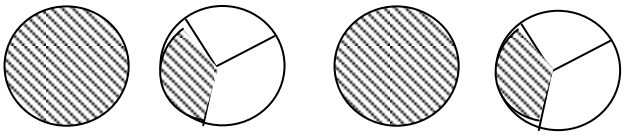
SUBTOPIC : Mixed fractions as improper fractions

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 | **Working 2**

$\frac{5}{2}$ is $\frac{2}{2} + \frac{2}{2} + \frac{1}{2}$

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

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

$\frac{5}{2} = 2\overline{)5}^{2}$

$\underline{-4}$

1

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

ACTIVITY: Exercise 5k page 92

LESSON 15

TOPIC : FRACTIONS

SUBTOPIC : Addition of mixed fractions with the same denominators.

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

Re-arrange: $= (1 + \frac{1}{3}) + (4 + \frac{1}{3})$

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

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

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

ACTIVITY: Exercise 5L page 93.

LESSON 16

TOPIC : FRACTIONS

SUBTOPIC : Addition of 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?

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

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

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

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

$$13 + 1$$

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

ACTIVITY: Exercise 5L page 93.

LESSON 17

TOPIC : FRACTIONS

SUBTOPIC : Subtraction of mixed fractions with the same denominators

CONTENT : Subtract $4\frac{3}{5} - 2\frac{1}{5}$.

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

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

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

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

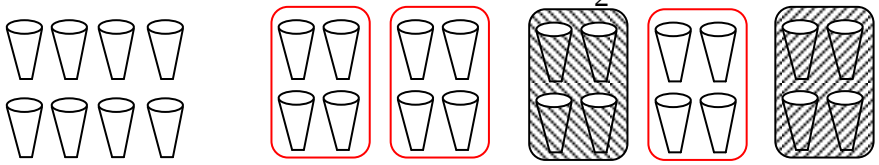
ACTIVITY: Exercise 5m page 93 old edited MK bk 4

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?

$\frac{2}{\cancel{5}}$ x $1\overset{20}{\cancel{00}}$ = 2 x 20

= 40 cows

Find the number of cows his remained with

100 - 40 = 60 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: $\Rightarrow \frac{1}{2} \times \frac{1}{4} = \frac{1}{8}$ $\Rightarrow \frac{3}{4} \times \frac{2}{3} = \frac{6}{12}$

$\Rightarrow \frac{1}{4}$ of $\frac{1}{3}$ $\Rightarrow \frac{1}{10}$ of $\frac{5}{8}$

$\Rightarrow \frac{1}{4} \times \frac{1}{3} = \frac{1}{12} \Rightarrow \frac{1}{10} \times \frac{5}{8} = \frac{5}{80}$

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

LESSON 21

TOPIC : FRACTIONS

SUBTOPIC : Writing decimal fractions in words.

CONTENT : Example 1

Write 0.2 in words

0.2

└ Tenth

0.2 is either two tenths

Or zero point two

ACTIVITY: Exercise 5r page 99.

LESSON 22

TOPIC : FRACTIONS

SUBTOPIC : Writing fractions in decimals upto tenths

CONTENT : Example 1

$\frac{4}{10}$ = ones | Tenth

0 | 4 = 0.4

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

10

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 24

TOPIC : FRACTIONS

SUBTOPIC : Place values of decimal upto tenths

CONTENT : Examples

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

0 . 3

Tenths

Ones

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

LESSON 25

TOPIC : FRACTIONS

SUBTOPIC : Addition of simple decimal fractions

CONTENT : Examples: 2.3 + 3.8

$$\begin{array}{r} 2.3 \\ \underline{3.8} \\ \underline{\underline{6.1}} \end{array}$$

Example II: Add: 2 + 0.7

$$\begin{array}{r} 2 \\ \underline{+\,0.7} \\ \underline{\underline{2.7}} \end{array}$$

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

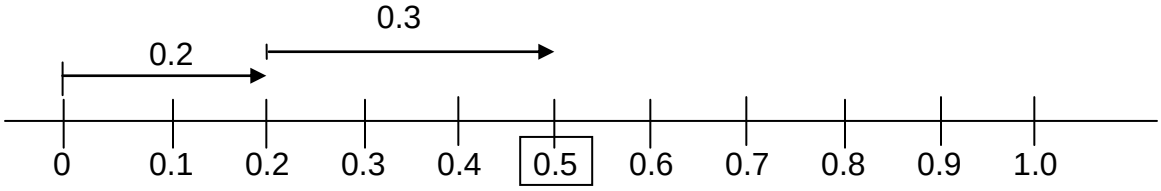
LESSON 26

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 8.5m. 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

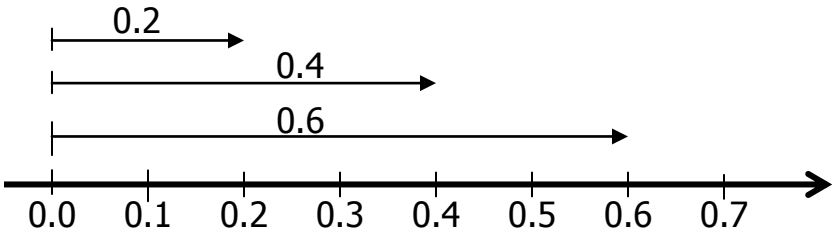
LESSON 30

TOPIC : FRACTIONS

SUBTOPIC : Ordering decimal fractions

CONTENT : Example 1.

Arrange 0.6, 0.2, 0.4 starting with the smallest



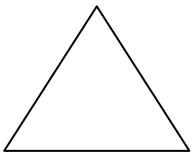
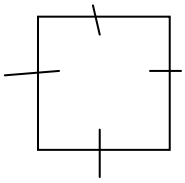
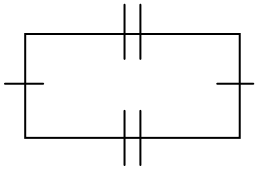
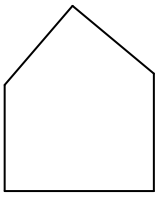
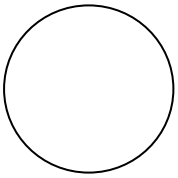
∴ The order is 0.2, 0.4, 0.6

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

LESSON 31

TOPIC : GEOMETRY

SUBTOPIC : Naming and identifying 3 dimensional figures

Triangle	Square	Rectangle	Pentagon	Circle
				

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

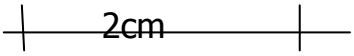
LESSON 32

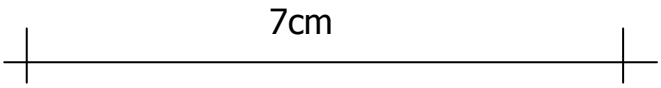
TOPIC: GEOMETRY

SUB TOPIC: DRAWING LINES

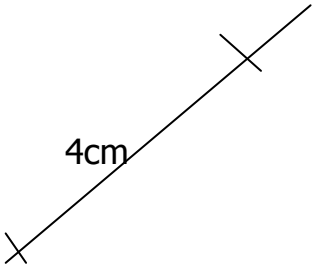
1. Draw lines of the following lengths

a) 2cm b) 7cm





c) 4 cm



Activity: Teachers collection

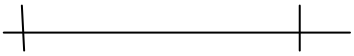
LESSON 33

TOPIC: GEOMETRY

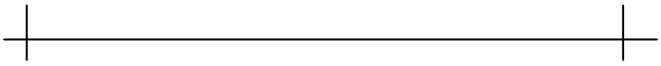
SUB TOPIC: measuring line segments

1. Use a ruler to measure the following line segments

a)



b)

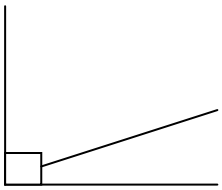


LESSON 34

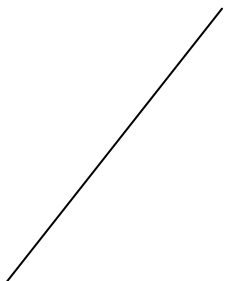
TOPIC: GEOMETRY

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

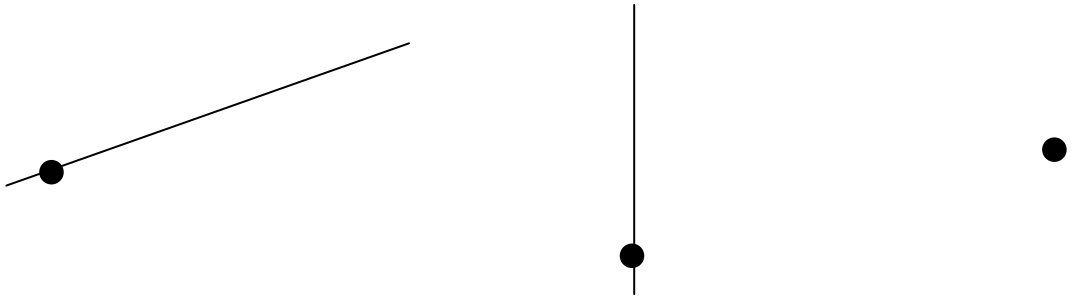
1. Find the right angles in the object found in the classroom and compound
2. Identify right angels from the drawn angles



Right angle



3. Copy and draw a right angle at the given point



Activity : Pg 98 , A new Mk 20000 bk 4

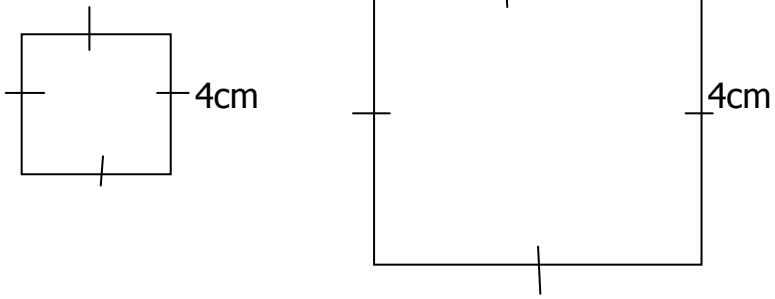
LESSON 35

TOPIC: GEOMETRY

SUB TOPIC: drawing a square and a rectangle using a set square and a ruler

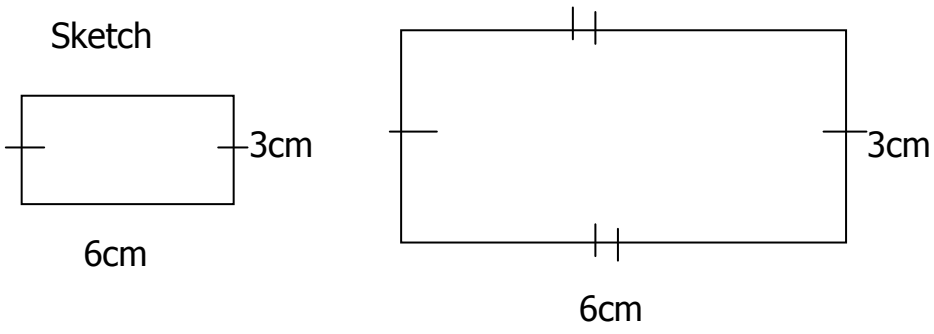
1. Use a set square and a ruler to draw a square whose sides are 4cm

Sketch



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

Sketch



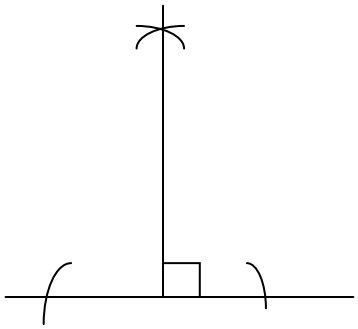
Activity: Exercise pg 93 , A new Mk 2000 bk 4

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



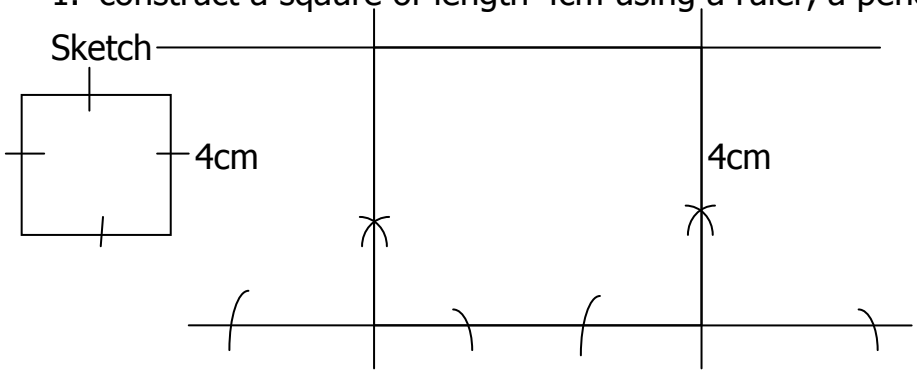
Activity: pg 93 A new Mk 2000 bk 4

LESSON 37

TOPIC: GEOMETRY

SUB TOPIC: constructing a square

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



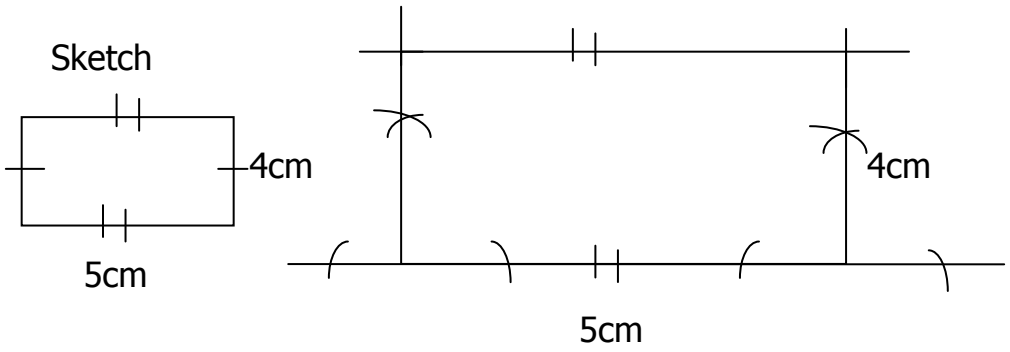
Activity: pg 93 A new Mk 2000 bk 4

LESSON 38

TOPIC: GEOMETRY

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



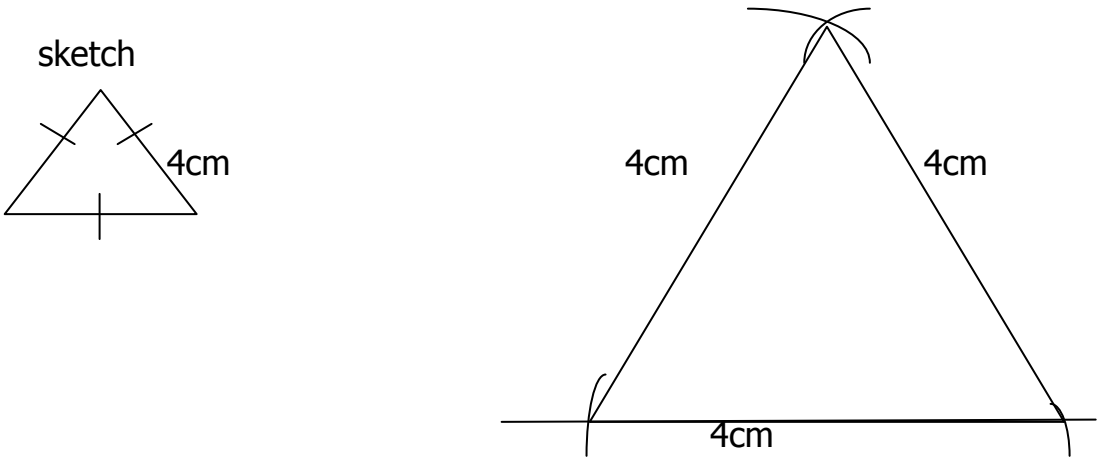
Activity pg 94 new Mk 2000 bk 4

LESSON 39

TOPIC: GEOMETRY

SUB TOPIC: construction of an equilateral triangle

1. construct an equilateral triangle of sides 4cm



Activity: pg 95 new Mk 2000 bk 4

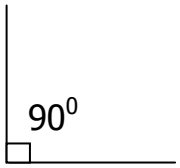
LESSON 40

TOPIC : GEOMETRY

SUBTOPIC : Drawing and measuring angles using a protractor

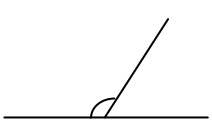
CONTENT : Using a ruler, pencil and a protractor, draw the following angles.

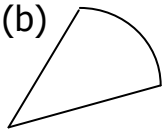
(a) (b) 45^0 (c) 60^0 (d) 30^0



ACTIVITY: Using a protractor, measure the following angles.

(a) (b) (c)





LESSON 41

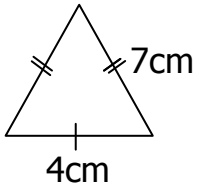
TOPIC : GEOMETRY

SUBTOPIC : finding perimeter of 2-dimensional shapes

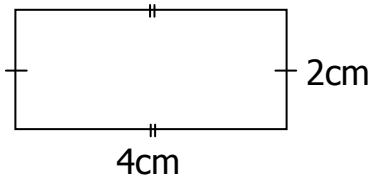
ACTIVITY:

1. Find the perimeter of the following:-

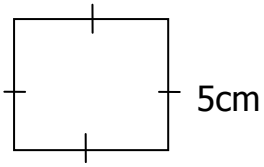
(a)



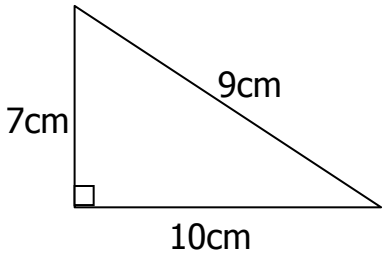
(b)



(c)



(d)

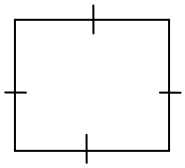


LESSON 42

TOPIC : 2 DIMENSIONAL GEOMETRY

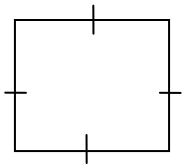
SUBTOPIC : Find the area of a square

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



Length = 3cm
Area = S x S
= 3cm x 3cm
= $9cm^2$

Find the area of:



Area = S x S
= 8cm x 8cm
= $64cm^2$

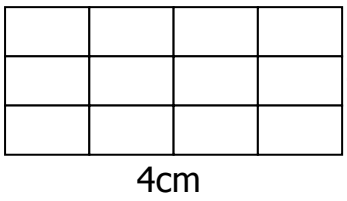
ACTIVITY: Exercise 12a page 210.

LESSON 43

TOPIC : 2 DIMENSIONAL GEOMETRY

SUBTOPIC : Find the area of a rectangle.

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



A = L x W
A = 4cm x 3cm
A = $12cm^2$

2. Workout the area of the rectangle below

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

LESSON 44

TOPIC : GEOMETRY

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.

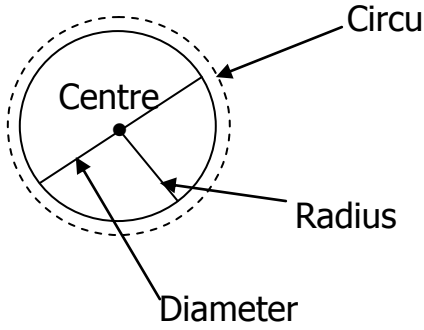
- Draw a circle using
  * a circular object
  * a pair of compasses.

LESSON 45

TOPIC : GEOMETRY

SUBTOPIC : Parts of a circle. (Naming)

CONTENT : Parts shown on circles



AB is a chord because it is a straight line joining two points on a circle.

ACTIVITY: Exercise 7e page 130

LESSON 46

TOPIC : GEOMETRY

SUBTOPIC : Finding the diameter when given the radius.

CONTENT : Example

Radius	2cm	6cm	7cm	9cm	10cm	13cm
Diameter	4cm	12cm	14cm	18cm	_____	_____

Diameter = r + r
= 6 + 6 = 12cm

Diameter = r + r
= 7cm + 7cm = 14cm

Diameter = r + r
= 9 + 9 = 18cm

Diameter = r + r
= 10 + 10 = 20cm

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

LESSON 47

TOPIC : GEOMETRY

SUBTOPIC : Finding the radius when given the diameter.

CONTENT : Example

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

Radius = Diameter
2

$= \frac{\cancel{12}^{6}}{\cancel{2}}$ = 6cm.

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

LESSON 48

TOPIC : GEOMETRY

SUBTOPIC : Polygons. (Drawing and naming polygons)

CONTENT : Examples of common polygons.

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

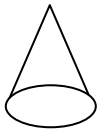
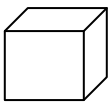
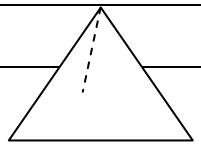
ACTIVITY: Exercise on page 136 Mk bk 4

LESSON 49

TOPIC : 3 DIMENSIONAL FIGURE

SUBTOPIC : Identifying and naming 3 dimensional figures.

CONTENT : Solid shapes.

Geometric solid shapes	**Name**
	Cone
	Cylinder
	Cuboid
	

	Triangular Pyramid

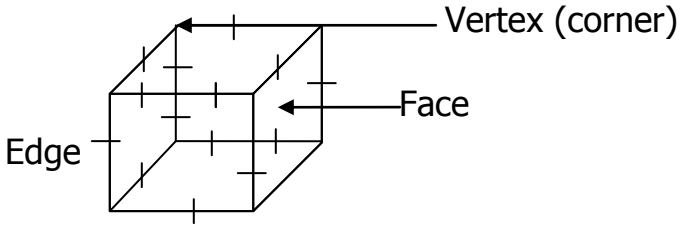
ACTIVITY: Exercise 7b page 126. MK bk 4

LESSON 50

TOPIC : 3 DIMENSIONAL GEOMETRY

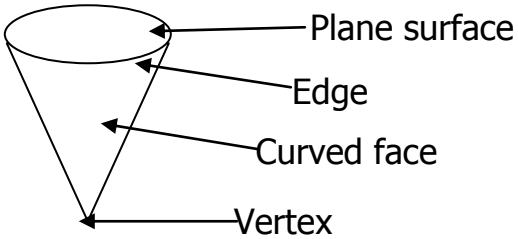
SUBTOPIC : Naming parts of the solid shapes

CONTENT : Cube.



6 faces
8 vertices
12 edges

Cone



2 faces
1 vertex
1 edge

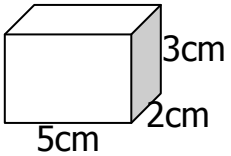
ACTIVITY: Exercise 7c page 127

LESSON 51

TOPIC : 3 DIMENSIONAL GEOMETRY

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

CONTENT : Example:



$V = L \times w \times h$

$V = 5cm \times 2cm \times 3cm$

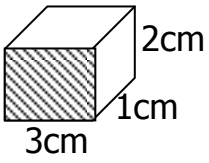
$\underline{V = 30cm^3}$

Area of the shaded part

Area = L x w

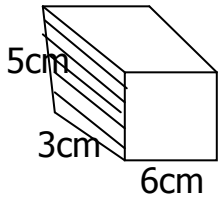
ACTIVITY: Exercise will be given like:

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

2. 

(i) Find the volume.

(ii) Find the area of the shaded part.

3. 

(i) Find the Area of the shaded part.

(ii) Find the volume

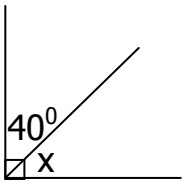
Refer to exercise 12a page 220 MK bk 4 (Old Edition)

LESSON 52

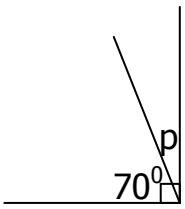
TOPIC : 3 DIMENSIONAL GEOMETRY

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



$x + 40^0 = 90^0$
$x + 40^0 - 40^0 = 90^0 - 40^0$
$x = 90^0 - 40^0$
$x = 50^0$



$P + 70^0 = 90^0$
$P + 70^0 - 70^0 = 90^0 - 70^0$
$P = 90^0 - 70^0$
$\underline{P = 20^0}$

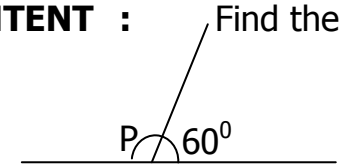
ACTIVITY: Exercise 7k page 139 Mk bk 4

LESSON 53

TOPIC : 3 DIMENSIONAL GEOMETRY

SUBTOPIC : Straight angles or supplementary angles of only two angles

CONTENT : Find the value of angle P.

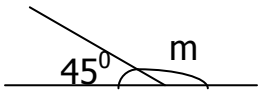


$P + 60^0 = 180^0$

$P + 60^0 - 60^0 = 180^0 - 60^0$

$P = 180^0 - 60^0$

$\underline{P = 120^0}$



$m + 45^0 = 180^0$

$m + 45^0 - 45^0 = 180^0 - 45^0$

$m = 180^0 - 45^0$

$\underline{m = 135^0}$

ACTIVITY: Exercise 7p Page 142.

LESSON 54

TOPIC : GRAPHS AND DATA INTERPRETATION

SUBTOPIC : Tallies

CONTENT : Complete the tally marks

𝍸 /// = 8, 𝍸 𝍸 = 10, 𝍸 𝍸 ///= 13, 𝍸 𝍸 𝍸 𝍸 𝍸 / = 26

𝍸 //// = 9

Making tally marks.

7 = 𝍸 𝍸 // 5 = 𝍸, 12 = 𝍸 𝍸 //

17 = 𝍸 𝍸 𝍸 //, 9 = 𝍸 ////

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	𝍸	𝍸 ///	//	///
Tuesday	𝍸 /	𝍸 //	𝍸 //	/
Wednesday	𝍸 𝍸 /	/	///	𝍸 ////
Thursday	𝍸 /	///	𝍸	𝍸 𝍸

(a) How many cars were seen on Monday?
18 cars were seen on Monday

(b) Which colour appeared most?
White colour appeared most.

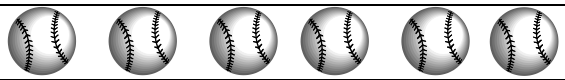
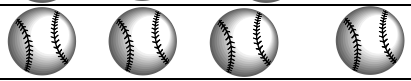
ACTIVITY: Exercise 6b page 107

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.

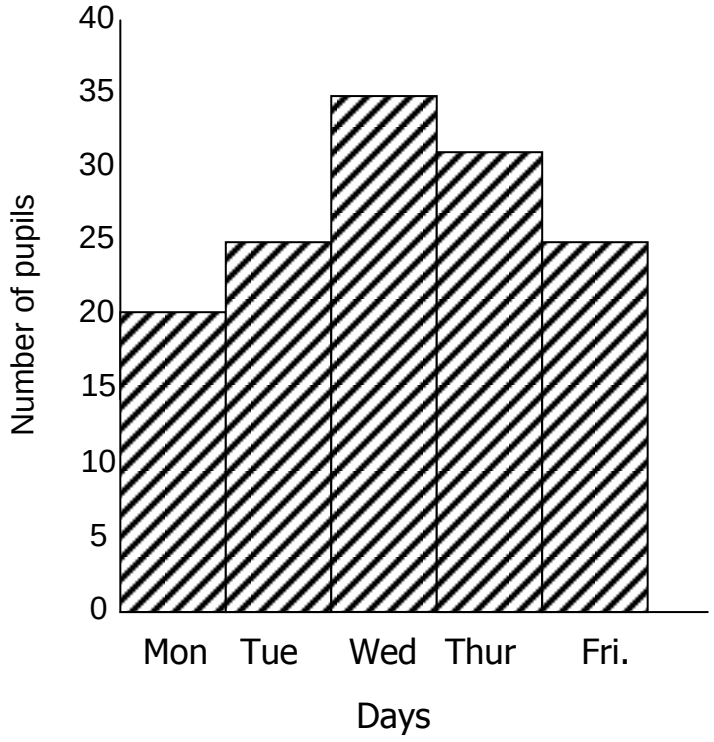
ACTIVITY: Exercise 6f page 111 and 112.

LESSON 57

TOPIC : GRAPHS

SUBTOPIC : Bar graphs

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



(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?

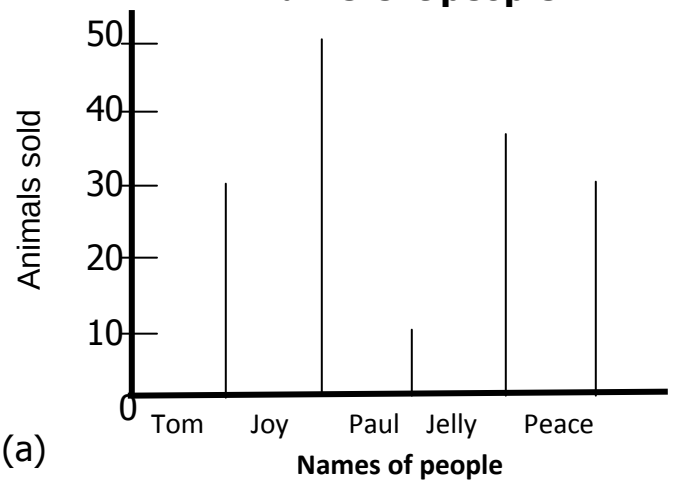
On Wednesday, there was the biggest attendance.

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
		A L G E B R A	Equations with and without letters	▪ 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. Equation of: ▪ Addition ▪ Subtraction ▪ Division e.g. 2x = 8, x÷2 = 4 ▪ Forming equations of addition and subtraction.	▪ 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.	▪ Reads and creates simple equations without letters.	▪ Guided discovery. ▪ Participatory approach. ▪ Discussion. ▪ Brain storming.	▪ Effective communication. ▪ Critical thinking. ▪ Problem solving.	▪ Books. ▪ Pens ▪ Text books.	-Adding -Subtract -Forming equations	MK primary pupils bk 4 pg. 245-260

		M E A S U R E S	**Money**	▪ Recognition of money. ▪ Coins ▪ Bank notes ▪ Change shs. to cents and vice versa. ▪ Subtracting of money. ▪ Multiplication of money. ▪ Direct proportions. ▪ Buying and selling shopping bills. ▪ Division of money. ▪ Profit and loss. ▪ Postage rates.	• Identifies coins and notes. • Buying and selling. • Calculates simple profits and loss. • Costs and pricing.	• Describes different coins and notes. • Roles playing using money in English. • Uses examples to describe meaning of profit and loss.	• Discussion. • Explanation. • Observation. • Demonstration • Dramatization. • Role playing.	▪ Effective communication. ▪ Critical thinking. ▪ Creativity.	▪ Coins. ▪ Bank notes. ▪ Classroom shape ▪ Real objects. ▪ Backs pens. ▪ Tins ▪ Envelopes ▪ Straws ▪ Bottles etc	Role playing using money. Role playing the and buyer seller. Describing coins notes. Giving examples of profit and loss. Working out problems involving profits and loss.	
			Time	• Revision on time. • Telling time. • Changing hours to minutes. • Addition of time. • Word problems. • Subtraction of time. • Word problem • Time in a.m. and p.m.	▪ Uses different types of clocks to tell time. ▪ Converts measures of time. ▪	▪ Tells time in the local language and English. ▪ Gives months of the year in English.	▪ Explanation. ▪ Discussion ▪ Question and answer. ▪ observation. ▪ Demonstration. ▪ Role playing.	▪ Effective communication. ▪ Critical thinking. ▪ Creative thinking. ▪ Logical thinking. ▪ Effective communication.	▪ Wall clocks. ▪ Calendars. ▪ Timetable.	▪ Using real or model clock, the learner tells time. ▪ Making a calendar showing what month of the year. ▪ Working	New edition MTC MK pupils Bk 4 Pg. 161 185
				• Changing days to hours. • Changing hours to days.	months to days.	timetable in his / her exercise	▪	▪ Critical thinking.	▪	out problems involving time.	

				• Changing weeks to days. • Changing days to weeks. • Addition of weeks and days • Subtraction of time in weeks and days.		book.				▪ Reading.	
		MEASUREMENTS	Capacity	• Half and quarter litres. • Addition of litres as half litres. • Addition of litres and milliliters.	• Adds litres as half litres and millililiters.	• Expresses capacity of different items	▪ Discussion. ▪ Explanation. ▪ Question and answer.	▪ Critical thinking. ▪ Effective communication. ▪ Logical reasoning.	▪ ½ litre containers. ▪ 1 litre container.	▪ Packing ▪ Adding.	New MK MTC MK Bk. 4 pg. 222 – 227.
			Weight and volume (mass)	• 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.	• Changes Kgms go gms and vice versa. • Adds and subtracts kgms and gms.	• Expresses weight and volume of different items.	▪ Discussion. ▪ Explanation ▪ Question and answer.				New MK MTC pupils Bk 4 Pg. 228 - 235

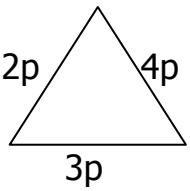
LESSON NOTES FOR MATHEMATICS P.4 TERM III 2016

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

1. Add m + m + m + m
   M+m+m+m = 3m

2. Simplify 2y + y + 3y
   2y+3y + y = 6y

3. Find the perimeter of the figure



P = s+s+s
= 3p+4p+2p
= 9p

Activity ☺Exercise 16 Mk bk 4 pg 250

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

1. Workout
   3m - m
   3m – m = 2m

2. Simplify;
   7 y – 4y
   7y – 4y = 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

a) 2k + 5m + k
   (2k+k) + 5m
   3k + 5m

b) 7x +10 y + 2x + y
   7x + 2x + 10 y + y
   9x + 11y

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) $\square + 3 = 9$

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

$\square = 6$

(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) $\square - 4 = 6$

$\square - 4 - 4 = 6 + 4$

$\square = 10$

(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) $m + m + m = 3m$ (b) $x + x + x + x + x = 5x$

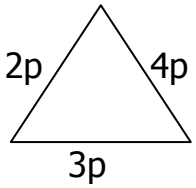
ACTIVITY: Exercise 16f Mk Bk4 pg. 248

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

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

ACTIVITY: Exercise 16h Mk Bk4 pg. 250

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



Perimeter = s + s + s
= 3p + 4p + 2p
Perimeter = 9p

ACTIVITY: Exercise 16 Mk Bk 4 pg. 250

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

(a) Collect like terms
= x + y + x + 3y + x
= x + x + x + y + 3y
= 3x + 4y

(b) Collect like terms
= 8b + 2p + 12b + 3p
= (8b + 12b) + (2p + 3p)
= 20b + 5p

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

LESSON 10

TOPIC : ALGEBRA

SUBTOPIC : Collecting like terms (Subtraction)

CONTENT : Example:

(a) Collect like terms

= 9d + 4c – 3c

= 9d + c

(b) Collect like terms

= 6a + a - m

= 7a - m

ACTIVITY: Exercise 5k page 252

LESSON 11

TOPIC : ALGEBRA

SUBTOPIC : Subtraction

CONTENT : Example: (a) If P = 3 and m = 6, find the value of

(i) P + 4 = 3 + 4

= 7

ACTIVITY: Exercise 16m Mk pg. 253

LESSON 9

TOPIC : ALGEBRA

SUBTOPIC : MORE SUBSTITUTION

CONTENT : Examples: If x = 3, y = 4 and z = 5, Find the value:

(a) = x + y + z

= 3 + 4 + 5

= 12

(b) xyz

= x x y x z

= 3 x 4 x 5

= 60

ACTIVITY: Exercise 16n Mk bk 4 pg. 253

LESSON 10

TOPIC : ALGEBRA

SUBTOPIC : Solving equations involving addition

CONTENT : Example:

(a) $\square + 3 = 9$

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

$\square = 6$

(b) $4 + y = 10$

$4 - 4 + y = 10 - 4$

$= 6$

ACTIVITY: Exercise 16d Mk bk 4 page 247

LESSON 11

TOPIC : ALGEBRA

SUBTOPIC : Solving equations involving subtraction

CONTENT : Example:

(a) $\square - 3 = 5$

$\square - 3 + 3 = 5 + 3$

$\square = 8$

(b) $y - 4 = 7$

$y - 4 + 4 = 7 + 4$

$y = 11$

ACTIVITY: Exercise 16e Mk bk 4 page 247

LESSON 12

TOPIC : ALGEBRA

SUBTOPIC : Solving equations involving multiplication

CONTENT : Examples.

(a) $3p = 21$

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

$P = 7$

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

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

$\square = 2$

LESSON 13

TOPIC : ALGEBRA

SUBTOPIC : Solving equations involving division

CONTENT : Examples:

(a) $h \div 3 = 2$

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

$h = 6$

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

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

$y = 20$

ACTIVITY: Exercise 16r and 16s Mk bk 4 page 256

LESSON 14

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

$y - 3 = 17$

$y - 3 + 3 = 17 + 3$

$y = 20$ $\therefore$ the number is 20.

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

LESSON 15

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

$4 \times n = 40$

$\frac{4n}{4} = \frac{40}{4}$ (10)

$n = 10$ ∴ 10 pupils are in each group

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

REMARKS

LESSON 16

TOPIC : MONEY

SUBTOPIC : Recognition of money

CONTENT :

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

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

REMARKS.

LESSON 17

TOPIC : MONEY (measures)

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. 1200
Sh. 6000

A man had sh. 6000 altogether.

ACTIVITY: Exercise 8b page 149 MK 4

LESSON 18

TOPIC : MONEY (Measures)

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 MK bk4

LESSON 19

TOPIC : MONEY (Measures)

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 MK bk4

LESSON 20

TOPIC : MONEY (Measures)

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 21

TOPIC : MONEY (Measures)

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 500/= each.

(a) Find her total expenditure.

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

Working

Chaps	Chapatis	Soda
500=	800=	500=
x 3	x 4	x 2
1500	3200=	1000=

Total expenditure

Sh. 3200

1500

\+ 1000

Sh. 5700

Balance = Sh. 8000

\- 5700

Sh. 2300

ACTIVITY: Teachers collection.

LESSON 22

TOPIC : MONEY (Measures)

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 - $\frac{\cancel{1200}^{300}}{\cancel{4}}$ = 300/=

ACTIVITY: Exercise 81 page 153 (Mk new Edition)

LESSON 23

TOPIC : MONEY (Measures)

SUBTOPIC : Finding profit

CONTENT : Profit = selling price – buying 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
Profit	=	S.P – B.P
	=	Sh. 1000 – 800
	=	Sh. 200

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

LESSON 24

TOPIC : MONEY (Measures)

SUBTOPIC : Finding Loss

CONTENT : Example: John bought a shirt at 7200/= and sold it at 6000/=. Calculate his loss.

Loss = B.P – S.P

= B.P = 7200/=

Loss = 7200/= – 6000/=

= 1200/=

Loss = 1200/=

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

LESSON 25

TOPIC : MONEY (Measures

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 Asia America	Sh. 16,000 Sh. 22,500 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 x 2 = sh. 800

3 letters to Tanzania will pay shs. 400 x 3 = sh. 1200

Total Cost = Sh. 2000

Therefore, Joseph will pay 2000/=

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

LESSON 26

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 27

TOPIC : TIME

SUBTOPIC : Changing hours to minutes

CONTENT : Examples

(a) Change 4hrs to minutes

1 hr = 60 minutes

4 hrs = (4 x 60) minutes

240 minutes

b) How many minutes are in 3 ¼ hours?

$\Rightarrow$ 3¼ hrs = (3 x ¼) hours

1hr = 60 min

3 hrs = (3 x 60) minutes

180 minutes
¼ hr = 15 minutes
3¼hrs = 195 minutes

Exercise 9b page 163 of MK bk 4

LESSON 28

TOPIC : TIME

SUBTOPIC : Writing the time in hours and minutes

CONTENT : Examples: Write 70 minutes in hours and
1 hr = 60 minutes

70 min = $60\overline{)70}^{1r10}$

$\underline{60}$

10

70 minutes = 1 hour 10 minutes.

ACTIVITY: Exercise 9c page 163 of Mk bk 4

LESSON 29

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 minutes = 1hr

140 minutes = $60\overline{)140}^{2r20}$

$\underline{120}$

020

So, 140 minutes = 2 hrs 20 minutes.

ACTIVITY: Exercise 9d page 164 of MK bk 4

LESSON 30

TOPIC : TIME

SUBTOPIC : Addition of time

CONTENT : (a) HRS MIN (b) HRS MIN

	3	40		1	50
+	4	30		2	15
	8	10		7	35

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

LESSON 31

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
4hrs	25min altogether

85 ÷ 60
= 1r25

ACTIVITY: Exercise 9f page 167 of Mk bk 4

LESSON 32

TOPIC : TIME

SUB TOPIC: Subtraction of time

CONTENT : Examples

(a)

Hrs	Min
~~4~~ 3	~~2~~ 80
- 1	50
1	30

(b)

Hrs	Min
~~3~~ 2	~~2~~ 85
- 1	45
1hr	40min

ACTIVITY: Exercise 9g page 168 Mk bk 4

LESSON 33

TOPIC : TIME

SUBTOPIC : Word problems of time (Subtraction)

CONTENT :

Bankunda spent 5hours 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 = 5hrs 20min

Time spent playing -1hr 30min

Time in class = 3hrs 50min

ACTIVITY: Exercise 9h page 169 of Mk bk 4

LESSON 34

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 35

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	=	7	: 15a.m
Duration	=	1hr	00min

So, she took 1 hour.

ACTIVITY: Exercise 9m page 176 of Mk bk 4

LESSON 36

TOPIC : TIME

SUBTOPIC : Changing days to hours

CONTENT : Examples

How many hours are in 5 days?

1 day = 24 hours

5 days = 2 4 hrs

x 5

5 days = 120hrs

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

LESSON 37

TOPIC : TIME

SUBTOPIC : Changing hours to days

CONTENT : Examples: How many days are in 72 hours?

Solution 24hrs make 1 day

1hr makes $\frac{1day}{24hours}$

72 hrs make $\frac{1day}{24hours} \times 72hrs$

$\frac{3}{2}$

72hrs = 3 hours.

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

LESSON 38

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 39

TOPIC : TIME

SUBTOPIC : Changing days to weeks

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

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

= 9 weeks

ACTIVITY: Exercise 9q page 178 of MK bk 4

LESSON 40

TOPIC : TIME

SUBTOPIC : Addition of time in weeks and days

CONTENT : (a)

	Wks	Days
	1	3
+	2	5
	4	1

8 ÷ 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
+4	6
10wks	4days

11 ÷ 7 = 1r4

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

LESSON 41

TOPIC : TIME

SUBTOPIC : Subtraction of time in wks and days

CONTENT : Example:

	Wks	Days
	$3^{\cancel{2}}$	2^{9}
-	1	5
	1	4

ACTIVITY: Exercise 9t page 182 of Mk bk 4

LESSON 42

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: pg 150 , a new Mk 2000 bk

LESSON 43

TOPIC : measure
SUBTOPIC : converting years into months

1. Change 3 years into months
   1 year = 12 months
   3 years = (3x12) months
   = 36 months

Activity: pg 151, a new Mk bk 4

LESSON 44

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÷2) years
   = 2 years

Activity: pg 152 a new Mk bk 4

LESSON 45

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 46

TOPIC : MEASURES (Length)

SUBTOPIC : Addition in metres and centimeters

CONTENT : Examples

Add:	2m	45cm	Add:	8m	25cm
	+ 6m	36cm		+ 6m	85cm
	8m	81cm		15m	10cm

ACTIVITY: Exercise 10d page 187 MK book 4.

LESSON 47

TOPIC : MEASURES (Length)

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	19	40

ACTIVITY: Exercise 10e page 188.

LESSON 48

TOPIC : MEASURES (Length)

SUBTOPIC : Subtraction of metres and centimetres

CONTENT : Example 1

Subtract :	M	CM
	6m	80cm
-	2m	60cm
	4m	20cm

Subtract :	M	CM
	~~9~~ ^{8}	
	9m	24cm
-	5m	30cm
	3m	94cm

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

LESSON 49

TOPIC : MEASURES (Length)

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
	6	15

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

	M	CM
His string measured	25	15
He cut off	- 18	35
Length of the string left	6	80

Subtract :	M	CM
	9m	24cm
-	5m	30cm
	3m	94cm

ACTIVITY: Exercise 10g page 189.

LESSON 50

TOPIC : MEASURES (Length)

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 51

TOPIC : MEASURES (Length)

SUBTOPIC : Changing metres to kilometers

CONTENT : Example 1

Change 3000m to km

Since 1000m = 1km

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

ACTIVITY: Exercise 10j page 193

LESSON 52

TOPIC : MEASURES (Length)

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 53

TOPIC : MEASURES (Length)

SUBTOPIC : Addition of long distances

CONTENT : Example 1

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

	Km	m
	15	880
+	6	750
	22	630

Add:

	Km	m
	13	530
+	8	670
	22	200

ACTIVITY: Exercise 10p page 197

LESSON 54

TOPIC : MEASURES (Length)

SUBTOPIC : Subtraction of long distances

CONTENT : Example 1

Subtract

	Km	m
	46	260
-	12	370
	33	890

Example 2

Subtract:

	Km	m
	280	455
-	130	690
	149	765

ACTIVITY: Exercise 10q page 198

LESSON 55

TOPIC : MEASURES (Capacity)

SUBTOPIC : Half and quarter litres

CONTENT : Example

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

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 56

TOPIC : MEASURE (Capacity)

SUBTOPIC : Addition of litres and half litres

CONTENT : Example.

Add 12 litres + 20 litres

12 litres

+20 litres

32 litres

2. Add 1 ½ litres + 2 ½ litres

ACTIVITY: Exercise13b pages 224-225 MK bk 4 old edition

LESSON 57

TOPIC : Measure

SUBTOPIC : Changing liters to mililitres

Change 5 litres to mililitres

1 liter = 1000ml
5 litres = (5x1000) ml
= 5000ml

LESSON 58

TOPIC : Measure
SUBTOPIC : converting mililitres to litres

Express 4000ml to litres
1000 ml = 1 litre
4000ml = 4000
1000
= 4 litres activity: pg 184 . new Mk bk 4

LESSON 59

TOPIC : WEIGHT (Measures)
SUBTOPIC : Changing kilograms to grams

CONTENT : Example

(a) Change $4\frac{1}{2}$ kg into grams

1kg = 1000g
4kg = 4000g
$\frac{1}{2}$ kg = 500g

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

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

1kg = 1000g

$\frac{4}{5}$ kg = $\frac{4}{\cancel{5}}$ x $\overset{200}{\cancel{1000}}$g

= 800g

ACTIVITY: Exercise 14c page 230 of Mk bk 4

LESSON 60

TOPIC : WEIGHT (Measures)

SUBTOPIC : Changing grams to kilograms

CONTENT : Example

(a) Change 2000g into kg

1000g = 1kg

2000g = $\frac{2\cancel{000}g}{\cancel{1000}g}$ x 1kg

= 2kg

(b) Change 4500g into kg.

1000g = 1kg

4500g = $\frac{45\cancel{00}}{\cancel{1000}}$ = $\frac{45}{10}$

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

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

LESSON 61

TOPIC : MEASURES

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 62

TOPIC : MEASURES

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
	100kg	400g

==========

ACTIVITY: Exercise 14g page 232

LESSON 63

TOPIC : MEASURE

SUBTOPIC : Subtraction of kilograms and grams

CONTENT : Examples

Subtract :

	Kg	g
	75	640
-	28	450
	47kg	190g

Subtract 59kg 423g – 39kg 651

	Kg	g
	59	423
-	39	651
	19kg	772g

ACTIVITY: Exercise 14h page 234

LESSON 64

TOPIC : MEASURE (Weight)

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		13kg	500g

ACTIVITY: Exercise 141 page 234 MK bk 4