

# LESSON NOTES FOR MATHEMATICS P.4 TERM 1- 3

## TERM 1

### LESSON 1

#### TOPIC I: SET CONCEPTS

#### SUB TOPIC: REVISION OF SETS

#### CONTENT: Definition

A set is a collection of well defined objects.

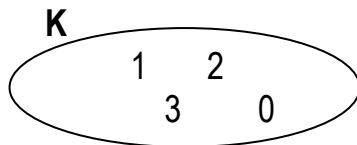
An element is an object or a thing which belongs to a set.

Naming sets

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

Listing members in a set

Eg.

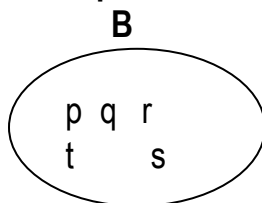


List the members of set K

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

Counting members in a set

#### Examples



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

$\therefore n(B) = 5$  members

X = {r, s, t}

set X has 3 members

Therefore  $n(x) = 3$  members.

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

Remarks.

**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  $\longleftrightarrow$

**Example.**

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

Set M is equivalent to set N

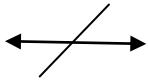
Or  $M \longleftrightarrow N$

**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:**



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  $\longleftrightarrow$

### Non equivalent sets

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

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

Set K  $\nleftrightarrow$  set M

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

## **LESSON 4:**

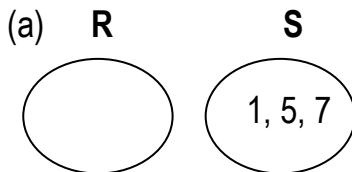
### **CONTENT: EMPTY SETS**

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

NB: Empty sets are also called "Null sets"

Symbol  $\emptyset$  or { }

### Examples



Set R is an empty set.

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

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

**Remarks.**

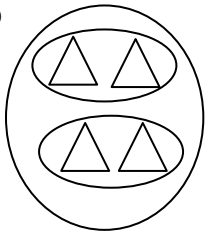
## LESSON 5:

**CONTENT: Even and Odd sets.**

Even sets are sets whose members can all be paired

**Example:**

**P**



Set P has 4 members.

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

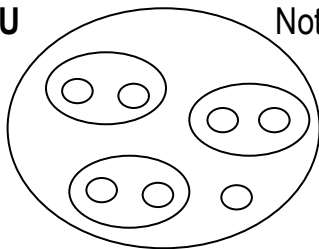
**Note:**An empty set is an even set.

### Odd sets

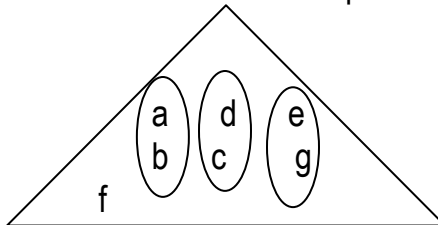
Odd sets are sets whose members can not all be paired. i.e they give a remainder when their members are paired.

**Example:**

**U**



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



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

**Remarks:**

## LESSON 6:

**SUBTOPIC :INTERSECTION OF SETS.**

**CONTENT: Symbol for intersection “ $\cap$ ”**

Intersection sets

**Examples:**

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

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

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

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

Identify the common elements by circling or ticking.

### Examples

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

Set W and N are non – intersecting sets.

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

### Drawing Venndiagrams and shading the intersection.

**Example:-**

**- Shading the intersection set.**



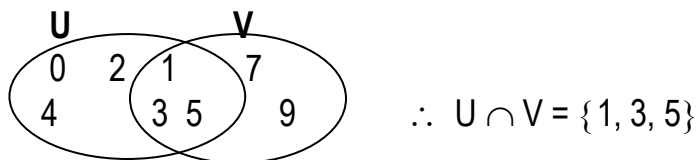
### ACTIVITY:

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

**Remarks**

### LESSON 7: Listing members in the intersection

**Example:**



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

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

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

### Number of elements in the intersection

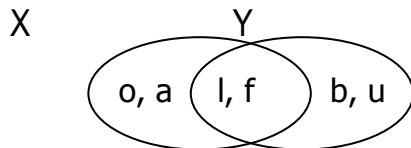
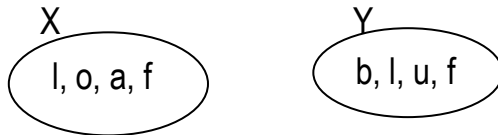
**Examples:**

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

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

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

Set



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

$\therefore n(X \cap Y) = 2$  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  $P = \{a, e, i, o, u\}$   $Q = \{a, b, c, d, e\}$

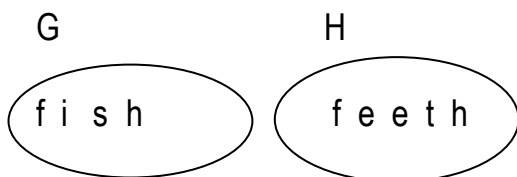
What is  $P \cup Q$ ?

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

**N.B:** All common members are written once.

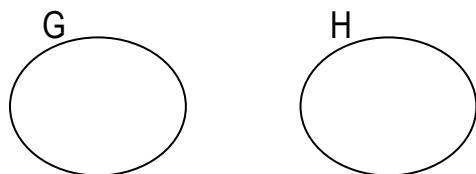
#### Listing members of the union set

##### Example:

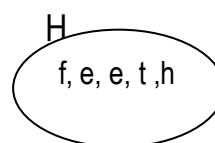
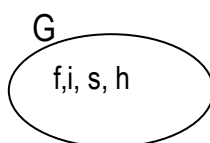
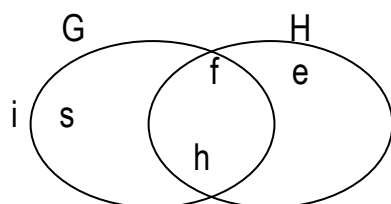
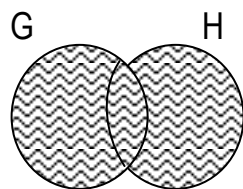


Drawing venn diagrams and shading.

**Examples:**



Shade  $G \cup H$



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

$\therefore$  Number of elements in the union set are 5

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

## LESSON 9: DIFFERENCE OF SETS

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

**Example:**

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

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

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

Find members of

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

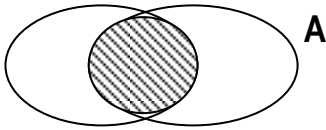
(ii) Set B only =  $\{0, 6, 8\}$

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

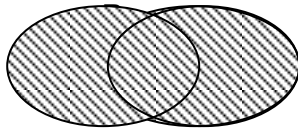
Members of set B only is shown as  $B - A$

**Showing the difference of sets on venn diagrams.**

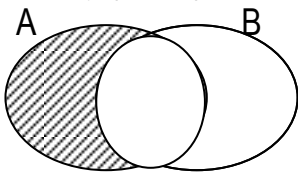
$A \cap B$



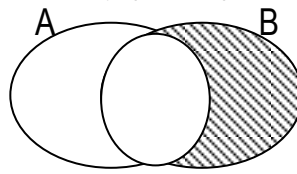
$A \cup B$



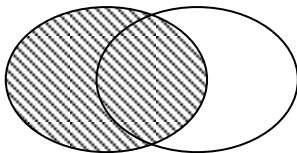
A only ( $A - B$ )



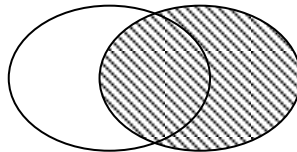
B only ( $B - A$ )



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:

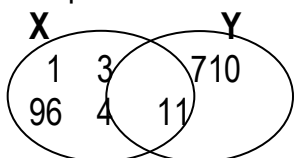
### CONTENT: REPRESENTING ELEMENTS ON A VENN DIAGRAM

#### Examples:

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

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

Represent the two sets on a venn diagram.





**List members of**

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

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

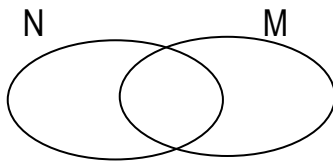
$$X \cap Y = \{4, 6\}$$

**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)  $M \cap N$

(v)  $P - Q$

(ii)  $M \cup N$

(vi)  $n(Q - P)$

(iii)  $n(P) \text{ only}$

(vii)  $n(Q) \text{ only}$

(iv)  $n(Q)$

**REMARKS****LESSON 11:****SUB TOPIC SUBSETS****CONTENT:****Definition**

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

An empty set is a subset of any set

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

A mother set is also a subset of itself.

At this level only use listing method

Symbol



Symbol for not subset



Listing subsets

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

The subsets are::

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

## LESSON 12

### THEME : NUMERACY

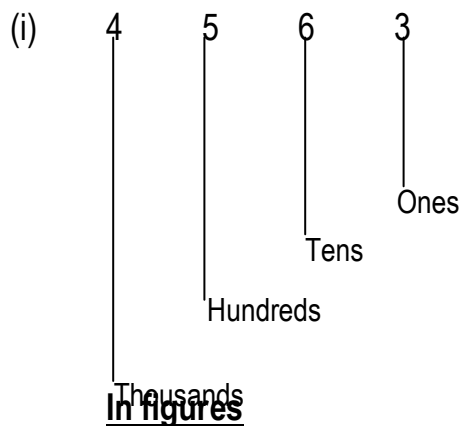
### TOPIC: Whole Numbers

(1) In words

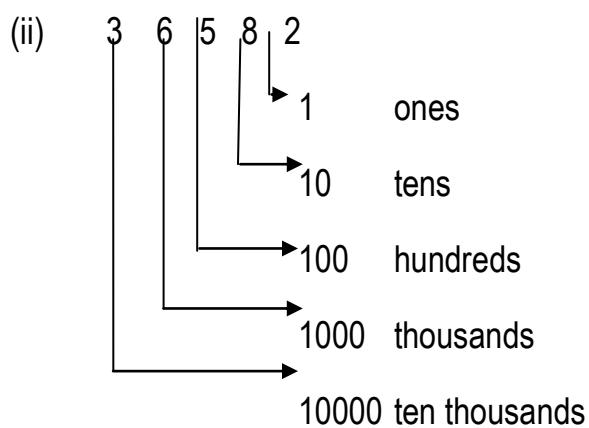
#### Example

MK Primary Mathematics book 4 (Old Edition)

Exercise 2b page 20.



In figures



(iii) Representing numbers on abacus.

#### Example

## LESSON 13

## SUBTOPIC: VALUES OF DIGITS IN NUMBERS

### Example: 1

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

ThTh H T O

7 4 6 3 2

\_\_\_\_\_  $2 \times 1 = 2$

\_\_\_\_\_  $3 \times 10 = 30$

\_\_\_\_\_  $6 \times 100 = 600$

\_\_\_\_\_  $4 \times 1000 = 4000$

\_\_\_\_\_  $7 \times 10000 = 70000$

## 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

Diagram showing place value expansion for 3746:

- 3 is in the Thousands (TH) place, representing 3000.
- 7 is in the Hundreds (H) place, representing 700.
- 4 is in the Tens (T) place, representing 40.
- 6 is in the Ones (O) place, representing 6.

Apply all the operations  
addition and subtraction of  
values

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

Example 2

Expand 623 using place values

H	T	O
6	2	3

Diagram showing place value expansion for 623:

- 6 is in the Hundreds (H) place, representing 600.
- 2 is in the Tens (T) place, representing 20.
- 3 is in the Ones (O) place, representing 3.

6 Hundreds + 2 Tens + 3 Ones

### ACTIVITY

Expand these using values

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

### Ref

MK Primary Mathematics Book 4 page 24  
Exercise 2f

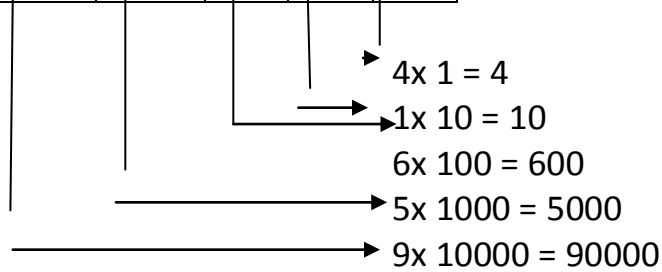
## LESSON 15

### EXPANDING NUMBERS USING VALUES

Example

Expand 95614 using its values

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



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

### ACTIVITY

MK Primary mathematics Book 4 Page 24

### LESSON 16:

#### SUB TOPIC:EXPANDED NUMBERS

#### **Examples:**

- (a) What number has been expanded to give  
 $(7 \times 1000) + (4 \times 100) + (3 \times 10) + (8 \times 1)$   
 $7000 + 400 + 30 + 8$   
 $= \underline{\underline{7438}}$

$$\begin{array}{r}
 7000 \\
 400 \\
 + 30 \\
 \underline{\quad 8} \\
 7438
 \end{array}$$

- (b) What number has been expanded to give  
 $(2 \times 10000) + (3 \times 1000) + (2 \times 10) + (1 \times 1)$   
 $20000 + 3000 + 20 + 1$

$$\begin{array}{r}
 20000 \\
 3000
 \end{array}$$

$$= \underline{\underline{23021}}$$

$$\begin{array}{r} 20 \\ + 1 \\ \hline 23021 \end{array}$$

**ACTIVITY**

What number has been expanded.

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

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

**CONTENT : Example:**

- (i) Write 4 3 2 6 in words

TH	H	T	O
4	3	2	6

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

Fourthousandthreehundredtwenty six

- (ii) Write 65702 in words

TTH	TH	H	T	O
6	5	7	0	2

Sixty five thousand seven hundred two.

**ACTIVITY**

New MK bk 4 pg 18

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

**CONTENT**

**Examples**

(a) Write twelve thousand four hundred seventy two

TH	H	T	O
12	4	7	2

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

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

**ACTIVITY**

New MK bk 4 pg 18

Exercise 2e

REMARKS.

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

(a) Round off 92 to the nearest tens

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

**ACTIVITY**

New MK Primary Mathematics Bk 4 pg 23-29

REMARKS

(b) 4 3 6

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

**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**

New MK Primary Mathematics Bk 4 pg 23-29

**REMARKS**

- (c) Round off 1245 to the nearest hundreds

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

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

Hindu Arabic	Roman Numerals
--------------	----------------

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



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

Roman numerals got by repeating 1 or x.

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

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

### Roman numerals got by adding to 5

$$6 = 5 + I \quad 7 = 5 + 2 \quad 8 = 5 + 3$$

$$6 = VI \quad 7 = VII \quad 8 = VIII$$

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

$$4 = 1 \text{ subtracted from } 5$$

$$4 = IV$$

$$40 = 10 \text{ subtracted from } 50$$

$$40 = XL$$

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

$$9 = IX$$

$$90 = 10 \text{ subtracted from } 100 \quad = \underline{XC}$$

## LESSON :22

Changing from Hindu – Arabic numerals to Roman numerals

### Examples:

$$(a) \quad 19 = 10 + 9$$

$$X + IX$$

$$= \underline{XIX}$$

$$(b) \quad 44 = 40 + 4$$

$$XL + IV$$

$$= \underline{XLIV}$$

Emphasize  
expansion of  
Roman numerals

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

Changing roman numerals into Hindu Arabic numerals.

**Example 1**

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

$$\text{XIV} = 14$$

**Example 2**

Change XXXIX to Hindu Arabic

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

$$\text{XXXIX} = 39$$

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

**LESSON :23**

**SUB TOPIC : WORD PROBLEMS INVOLVING ROMAN AND HINDU ARABI NUMERALS**

**Example:**

- (a) Henrys' age is 8. Write his age in Roman numerals.

$$8 = \text{VIII}$$

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

24 months

$$24 = 20 + 4$$

$$24 = \text{XX} + \text{IV}$$

$$24 = \text{XXIV}$$

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

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

**LESSON 24**

## SUBTOPIC : ADDITION OF ROMAN NUMERALS

### Examples

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

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

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

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

v) Find the sum of IV and XXV

### Subtraction of Roman numerals

#### Examples

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

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

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

$$\begin{aligned} \text{(d)} \quad & 45 = 40 + 5 \\ & = XL + V \\ & = \underline{XLIV} \end{aligned}$$

c) Subtract XII from XXIX

### ACTIVITY :

#### Example 1

(a) XXXIV + XLV

(d) XV + XXIX

(b) XCII + XL

(e) XXV - V

(c) XXIV - XVI

(f) XLIX - XII

#### Example 2

There are XXIV boys and XIX girls in the class.

a) Find the total number of pupils in the class

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

### LESSON 25

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

**Examples**

1. Add:  $7464 + 4425$

Arrange these numbers in their place values

	TH	H	T	O
	7	4	6	4
+	4	4	2	5
	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 33 exercise 3:1 (New edition)  
 Understanding mathematics bk 4 pg 30

**LESSON :26**

**More addition of numbers**

**Example:**

(i) **Add:**

	TH	H	T	O
	1	3	7	8
+	5	8	9	
	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

$$\begin{array}{r}
 1 \quad 4 \quad 3 \quad 3 \quad 1 \\
 + \quad 2 \quad 6 \quad 5 \quad 1 \\
 \hline
 1 \quad 6 \quad 9 \quad 8 \quad 2
 \end{array}$$

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

**LESSON : 27**

**Addition with word problems**

**Example:**

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

$$\begin{array}{lcl}
 \text{Alice carried} & = & 349 \text{ books} \\
 \text{Her brother} & = & +578 \text{ books} \\
 \text{Both carried} & = & \underline{927 \text{ books}}
 \end{array}$$

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?

$$\begin{array}{lcl}
 \text{Sugar} & \text{shs.} & 15,000 \\
 \text{Soap} & \text{shs.} & 800 \\
 \text{Matooke} & + \text{ Shs} & 3500 \\
 \hline
 \text{Total Expenditure sh.} & & 19,300
 \end{array}$$

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

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

**LESSON 28**

**SUB TOPIC: SUBTRACTION**

**Examples 1:**

1.  $246 - 192$
- |   |   |   |
|---|---|---|
| H | T | O |
|---|---|---|
- Arrange numbers vertically by their place values.
  - Subtract impossible numbers by borrowing.

$$\begin{array}{r}
 2 \quad 4 \quad 6 \\
 - 1 \quad 9 \quad 2 \\
 \hline
 0 \quad 5 \quad 4
 \end{array}$$

**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 regrouping using tens

**ACTIVITY: Exercise 3d (MK primary book four page38-41 (New Edition)**  
**Understanding MTC bk 4 pg 35**

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

(i)  $10246 - 3118$

	TTH	TH	H	T	O
	1	0	2	4	6
-	3	1	1	8	
		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?

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

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

Katabula had - 2500

He paid - 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

**TOPIC: OPERATION ON WHOLE NUMBERS**

**SUBTOPIC: MULTIPLYING BY 110 AND 100**

**CONTENT: MULTIPLYING BY ZERO, TEN AND HUNDRED**

Examples

Workout

a)  $12 \times 10 =$

(b)  $45 \times 0$

(3)  $0 \times 3 \times 2 \times 0$

d)  $47 \times 100$

(e)  $984 \times 100$

(f)  $86 \times 100$

**Activity**

New MK pupils' bk 4 pg 42-44

**LESSON: 31****TOPIC: OPERATION ON WHOLE NUMBERS****SUB TOPIC MULTIPLICATION OF 3 DIGIT NUMBERS BY NUMBER 1-10**

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

**CONTENT:** Multiplying by one digit

**Example 1:**

$$\begin{array}{r} \text{(i)} \quad 4 \ 3 \ 4 \ 6 \\ \times \quad 3 \\ \hline 13 \ 0 \ 3 \ 8 \end{array}$$

$$\begin{array}{r} \text{(ii)} \quad 1 \ 0 \\ \times \quad 2 \\ \hline 2 \ 0 \end{array}$$

$$\begin{array}{r} \text{(iii)} \quad 4 \ 3 \\ \times \quad 4 \\ \hline 172 \end{array}$$

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

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

**LESSON: 32**

**Word problems involving multiplication by one digit.**

**Example:**

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

**Solution:**

1 day he gets shs. 6960

7 days he gets 6 9 6 0

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

**∴ He gets 48,720 in 7 days.**

Apply lattice method on two digit numerals.

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

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

**LESSON: 33**

**Multiplication as repeated addition**

**CONTENT:**

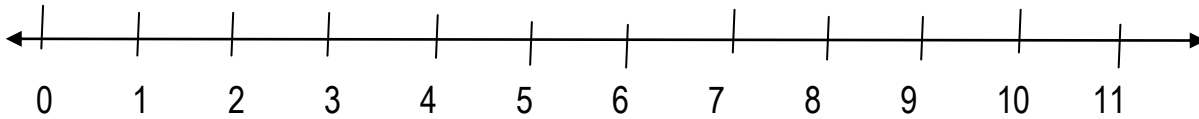
**Example:**

$$\text{(a)} \quad 4 \times 2 = 2 + 2 + 2 + 2$$



$$\begin{array}{r} \underline{\underline{= 8}} \\ \text{(b) } 3 + 3 + 3 + 3 = 4 \times 3 \\ \underline{\underline{= 12}} \end{array}$$

c) Show  $3 \times 2$  on a number line below



### ACTIVITY:

Use repeated addition to multiply the following:-

(i)  $3 \times 2$

**Complete**

(ii)  $6 \times 4$

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

(iii)  $4 \times 3$

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

(iv)  $5 \times 3$

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

(v)  $8 \times 2$

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

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

REMARKS

## LESSON 34

### SUB TOPIC : DIVISION

#### CONTENT : DIVISION AS REPEATED SUBTRACTION

Example

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

**ACTIVITY** : Exercise 31 page 53 (MK New Edition)

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

Example 1: Divide 4804 by 4.

$$\begin{array}{r}
 1201 \\
 4 \overline{) 4804} \\
 \underline{4} \phantom{00} \\
 08 \phantom{0} \\
 \underline{8} \phantom{0} \\
 0 \phantom{0} \\
 \underline{0} \\
 4 \\
 \underline{4} \\
 0
 \end{array}$$

$1 \times 4 = 4$   
 $2 \times 4 = 8$   
 $0 \times 4 = 0$   
 $1 \times 4 = 4$

Example 2:  $124 \div 4$ 

$$\begin{array}{r}
 31 \\
 4 \overline{) 124} \\
 \underline{12} \phantom{0} \\
 4 \\
 \underline{4} \\
 0
 \end{array}$$

$3 \times 4 = 12$   
 $1 \times 4 = 4$

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

Exercise 3:16 understanding MTcbkpg 48

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

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

**Divide**

Example 1:

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

$0 \times 2 = 0$   
 $6 \times 2 = 12$   
 $0 \times 2 = 0$

Each bag has 60 oranges

**Example 2**

Divide 246 text books among 3 classes

$$\begin{array}{r}
 082 \\
 3 \overline{) 246} \\
 \underline{24} \phantom{0} \\
 6 \\
 \underline{6} \\
 0
 \end{array}$$

$0 \times 3 = 0$   
 $8 \times 3 = 24$   
 $2 \times 3 = 6$

Each gets 82 books.

**ACTIVITY:** Exercise 3p (New Edition) MK Primary Mathematics book 4 page 55

### **LESSON 38**

#### **SUB TOPIC : DIVISION WITH REMAINDERS**

**CONTENT:** Examples

Example : Divide 38148 by 5.

$$\begin{array}{r}
 07629 \\
 5 \overline{) 38148} \\
 \underline{38} \phantom{00} \\
 2 \times 4 = 08 \\
 \underline{38} \phantom{00} \\
 7 \times 5 = 35 \\
 \underline{31} \phantom{00} \\
 6 \times 5 = 30 \\
 \underline{14} \phantom{00} \\
 2 \times 5 = 10 \\
 \underline{48} \phantom{00} \\
 9 \times 5 = 45 \\
 \underline{48} \\
 3
 \end{array}$$

$1 \times 3 = 0$

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

### **LESSON :36**

#### **SUB-TOPIC : DIVISION BY 10**

Example:

(i)  $650 \div 10$   
 $= \frac{650}{10}$

$\therefore 650 \div 10 = 65.$

(ii)  $420 \div 10$   
 $= \frac{420}{10}$

$\therefore 420 \div 10 = 42.$

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

**ACTIVITY :**

(i)  $200 \div 10 =$

(ii)  $370 \div 10 =$

(v)  $640 \div 10 =$

(vi)  $280 \div 10 =$

(vii)  $480 \div 10 =$

- (iii)  $810 \div 10 =$   
 (iv)  $340 \div 10 =$

## LESSON 39

### SUB-TOPIC : AVERAGE

Finding average or mean of numbers

Examples

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

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

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

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

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

### ACTIVITY:

A new MK primary mathematics book 5 page 76 – 77

## LESSON 39

**TOPIC : PATTERNS AND SEQUENCES**

**SUB-TOPIC : TYPES OF NUMBERS**

**CONTENT : Even and odd numbers**

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

Examples: 0, 2, 4, 6, 8

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

Exactly divisible by 2

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

Example 1, 3, 5, 7, 9

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

Not exactly divisible by 2

**ACTIVITY:** New MK Primary Mathematics book four page 59.

## LESSON 40

**SUB TOPIC:** More about Even and odd numbers.

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

### Examples:

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

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

∴ Even numbers between 10 and 20 are 4.

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

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

There are 5 odd numbers.

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

## LESSON 41

**SUBTOPIC :** More about even numbers.

**Finding the sum, difference and product of even numbers.**

### **Examples:**

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

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

Sum =  $0 + 2 + 4 + 6$

Sum = 12

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

= { 0, 2<sup>nd</sup>, 4, 6<sup>th</sup> }

Difference =  $6 - 2$

Difference = 4

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

{ 0, 2, 4, 6, 8 }

Product =  $0 \times 8 = 0$

4. List the even numbers between 20 and 40

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

## LESSON 42

**SUBTOPIC:** More about odd numbers.

**Finding the sum, difference and product of odd numbers**

**Examples:**

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

{1, 3, 7}

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

{1, 3, 7}

= 1 + 3 + 7

7

(iii) What is the product of the 3<sup>rd</sup> and 4<sup>th</sup> odd number?

Odd numbers = {1, 3, <sup>3<sup>rd</sup></sup>5, <sup>4<sup>th</sup></sup>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: counting numbers are infinite/endless

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

### Whole numbers

Write the missing numbers

0, 1, 2, 3, 4, 5, \_\_\_\_, \_\_\_\_, \_\_\_\_

These are whole numbers. They begin with Zero to infinity

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

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

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

(a) (1, 3, 5, 7, 9, \_\_\_\_, \_\_\_\_)

Keep adding 2

$1 + 2 = 3$

$3 + 2 = 5$

$5 + 2 = 7$

$7 + 2 = 9$

$9 + 2 = \boxed{11}$

$11 + 2 = \boxed{13}$

(b) (1, 2, 4, 5, 7, 8, \_\_\_\_)

Add 1 then add 2

Begin with

$1 + 1 = 2$

$2 + 2 = 4$

$4 + 1 = 5$

$5 + 2 = 7$

$7 + 1 = 8$

$8 + 2 = \boxed{10}$

The missing number is 10The missing numbers are 11 and 13**NOTE:** Every sequence has its own pattern

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

**LESSON 45****SUB TOPIC: NUMBER SEQUENCE****CONTENT: Number sequence by subtracting****Examples:**(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.

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

(i) List multiples of 4

$$1 \times 4 = 4$$

$$2 \times 4 = 8$$

$$3 \times 4 = 12$$

$$4 \times 4 = 16$$

$$5 \times 4 = 20$$

$$6 \times 4 = 24$$

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

(ii) List multiples of 5

$$1 \times 5 = 5$$

$$2 \times 5 = 10$$

$$3 \times 5 = 15$$

$$4 \times 5 = 20$$

$$5 \times 5 = 25$$

$$6 \times 5 = 30$$

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

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

**ACTIVITY:** Exercise 4g page 64 Mk book four New Edition.

**LESSON 47****SUB TOPIC: COMMON MULTIPLES AND LCM****CONTENT**

Examples

1. Find the first common multiples of 2 and 4

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

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

$$\text{Common multiples} = \{4, 8, 12, 16\}$$

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

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

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

$$\text{Common multiples} = \{20\}$$

$\therefore$  L.C.M is 20



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

## LESSON 48

**SUB TOPIC:** Counting in tens, hundreds and thousands.

Examples:

- (i) Fill in the missing number 10, 20, 30, \_\_\_\_, \_\_\_\_, \_\_\_\_ 70

**Add 10 to get the next number**

$$30 + 10 = 40$$

$$40 + 10 = 50$$

$$50 + 10 = 60$$

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

- (ii) Fill in the missing numbers 100, 200, 300, \_\_\_\_, \_\_\_\_, \_\_\_\_ 700

**Add 100 to get the next number.**

$$100 + 100 = 200$$

$$200 + 100 = 300$$

$$300 + 100 = 400$$

$$400 + 100 = 500$$

$$500 + 100 = 600$$

$$600 + 100 = 700$$

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

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

## LESSON 49

**SUBTOPIC:** Multiplying by 10, 100, 1000.

**CONTENT:** In this case, we simply add the number of zero to the number.

Examples:

(i)  $6 \times 10 = 60$

(ii)  $7 \times 100 = 700$

(iii)  $8 \times 1000 = 8000$

(iv)  $38 \times 100 = 3800$

**ACTIVITY:** Exercise 4n on page 69 New Edition MK primary Mathematics book four.

## LESSON 50

**SUBTOPIC:** Multiplying by multiples of 10

**CONTENT:**

Example 1.

(i) What is  $7 \times 30$ ?

$$7 \times 30 = ?$$

$$30 = 3 \times 10$$

$$\text{So } 7 \times 30 = 7 \times 3 \times 10$$

$$= 21 \times 10$$

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

Example (ii)

What is  $50 \times 30$ ?

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

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

$$= 15 \times 100$$

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

**ACTIVITY:** Exercise 4(o) page 70 New MK book 4

## LESSON 52

**SUB-TOPIC : MAGIC SQUARES**

7	a	5
b	4	c
3	d	1

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

b. = \_\_\_\_\_

c. = \_\_\_\_\_

d. = \_\_\_\_\_

Teach children  
how to form their  
own magic tables



## LESSON NOTES FOR MATHEMATICS P.4 TERM II

### **LESSON 1**

**TOPIC : FRACTIONS**

**SUBTOPIC : naming parts of fraction**

**CONTENT : Definition**

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

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

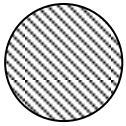
2 is the numerator

3 is the denominator

1 is the whole number

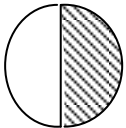
3. Names of fractions

Naming and shading fractions and writing in words.

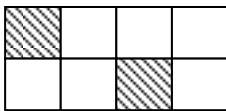


1 a whole

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



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



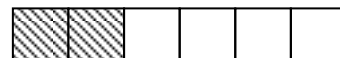
$\frac{2}{8}$  Two eights

4. Shade and unshaded fractions.

(a)  $\frac{4}{6}$



(b)  $\frac{1}{3}$  of 6



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

## **LESSON 2**

**TOPIC : FRACTIONS**

**SUBTOPIC : Finding equivalent fractions**

**CONTENT :** How to get equivalent fractions.

- We can use the knowledge of multiples.

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

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

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

$$\frac{2}{3} = \frac{2}{3} \times \frac{3}{3} = \frac{6}{9},$$

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

**ACTIVITY:** List the first three equivalent fractions for:

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

## **LESSON 3**

**TOPIC : FRACTIONS**

**SUBTOPIC : Equivalent fractions**

**CONTENT :** Finding the missing part of a fraction

Example: (a)  $\frac{1}{2} = \frac{\boxed{\phantom{00}}}{6}$

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

(b)  $\frac{3}{5} = \frac{\boxed{\phantom{00}}}{20}$

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

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

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

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

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

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

**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 (using H.C.F/G.C.F)

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

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

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

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

**ACTIVITY:** Exercise 5d MK bk 4 page 84

#### **LESSON 5**

**TOPIC :** FRACTIONS

**SUBTOPIC :** Comparing fractions without a number line

**CONTENT :**

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

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

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

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

Apply the symbols such as >, < or =

**ACTIVITY:** Exercise 5f MK bk 4 page 86

## **LESSON 6**

**TOPIC :** FRACTIONS

**SUBTOPIC :** Ordering fractions

**CONTENT :** Arranging fractions starting with the largest.

### **Example 1**

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

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

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

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

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

### **Example 2**

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

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

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

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

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

Example II



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

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

**ACTIVITY:** Exercise 51 page 89.

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

## **LESSON 10**

**TOPIC :** FRACTIONS

**SUBTOPIC :** Subtraction of fractions with the same denominators in

**word problem.**

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

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

### 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

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

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

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

**ACTIVITY:** Exercise 5n page 94

## **LESSON 12**

**TOPIC : FRACTION**

**SUBTOPIC : Subtraction of fractions with different denominators.**

**CONTENT : Example 1**

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

Using equivalent fractions.

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

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

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

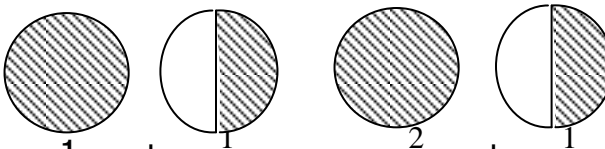
**ACTIVITY:** Exercise 50 page 95 old edited Mk bk 4

### **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**

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

**Working 2**

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

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

ACTIVITY: Exercise 5k page 92

**LESSON 15**

**TOPIC : FRACTIONS**

**SUBTOPIC : Addition of mixed fractions with the same denominators.**

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

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

2) Workout

$$\begin{aligned}&= 2\frac{1}{4} + 1\frac{1}{4} = \frac{9}{4} + \frac{5}{4} \\ &\quad \frac{9+5}{4} \\ &\quad \frac{14}{4} \\ &= 3\frac{2}{4}\end{aligned}$$

ACTIVITY: Exercise 5L page 93.

**LESSON 16**

**TOPIC : FRACTIONS**

**SUBTOPIC : Addition of mixed fractions with the same denominators in word problem.**

**CONTENT :** James bought  $6\frac{1}{4}$  kg of meat on Monday and  $7\frac{3}{4}$  kg on Tuesday.

How many kilograms did he buy altogether?

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

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

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

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

$$13 + 1$$

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

**ACTIVITY:** Exercise 5L page 93.

### **LESSON 17**

**TOPIC :** FRACTIONS

**SUBTOPIC :** Subtraction of mixed fractions with the same denominators

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

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

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

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

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

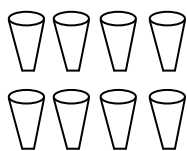
**ACTIVITY:** Exercise 5m page 93 old edited MK bk 4

### **LESSON 18**

**TOPIC :** FRACTIONS

**SUBTOPIC :** Fraction of a group.

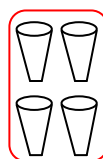
**CONTENT :** Example 1: What is  $\frac{1}{2}$  of 8?



8 glasses



2 groups



$\frac{1}{2}$  shaded



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

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

### **LESSON 19**

**TOPIC :** FRACTIONS  
**SUBTOPIC :** Application of fractions

**CONTENT :** A man had 100 cows on his farm. He gave away  $\frac{2}{5}$  to his wife and

remained with the rest. How many cows did he give his wife?

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

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

Find the number of cows his remained with

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

Find the fraction that he remained with;

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

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

**ACTIVITY :** Exercise 5s page 138 book 5

### **LESSON 20**

**TOPIC :** FRACTIONS  
**SUBTOPIC :** Multiplication of fractions

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

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

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

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

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

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

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

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

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

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

(a) Change 0.3 into a common fraction.

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

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

ACTIVITY : Exercise 5U page 100 MK Bk. 4

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

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

0 .03

Hundredths

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

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

Write 0.2 in words

0.2

└ Tenth

0.2 is either two tenths

Or zero point two

ACTIVITY: Exercise 5r page 99.

**LESSON 25****TOPIC : FRACTIONS****SUBTOPIC : Addition of simple decimal fractions****CONTENT :** Examples:  $2.3 + 3.8$  $2.3$  $3.8$  $6.1$ Example II: Add:  $2 + 0.7$  $2$  $+ 0.7$  $2.7$

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

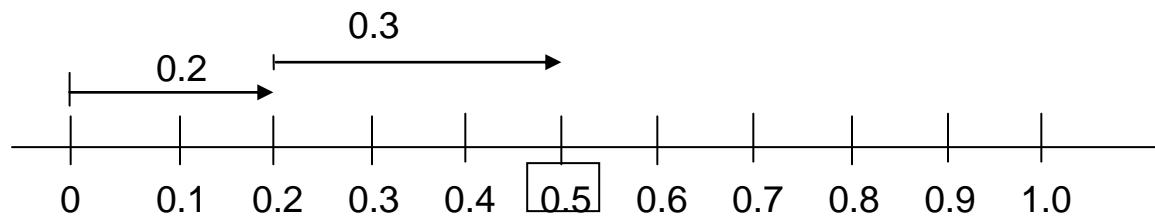
### **LESSON 26**

**TOPIC :** FRACTIONS

**SUBTOPIC :** Addition of decimal fractions using a number line.

**CONTENT :** Add:  $0.2 + 0.3$

Example:



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

### **LESSON 27**

**TOPIC :** FRACTIONS

**SUBTOPIC :** Word problems involving addition of fractions (decimals)

**CONTENT :** Examples:

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

Morning 0 . 2

Evening + 0 . 7

0 . 9 altogether.

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

### **LESSON 28**

**TOPIC :** FRACTIONS

**SUBTOPIC :** Subtraction of decimals.

**CONTENT :** Examples: Subtraction:  $0.5 - 0.2$   
0 . 5



$$\begin{array}{r} - 0.2 \\ 0.3 \\ \hline \end{array}$$

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

### **LESSON 29**

**TOPIC :** FRACTIONS

**SUBTOPIC :** Word problems involving subtraction of decimal

**CONTENT :**

Example:

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

Had 7.2m

Sold - 3.5m

= 3.7m

ACTIVITY: Exercise 5z9 MK pupils book 4 page 111

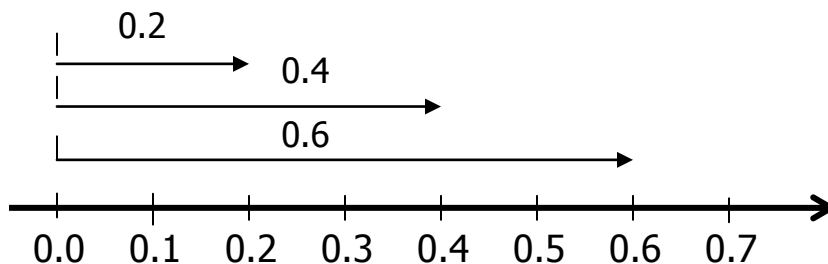
### **LESSON 30**

**TOPIC :** FRACTIONS

**SUBTOPIC :** Ordering decimal fractions

**CONTENT :** Example 1.

Arrange 0.6, 0.2, 0.4 starting with the smallest



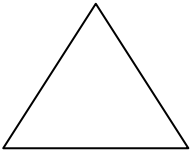
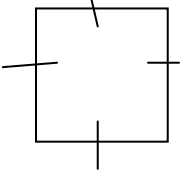
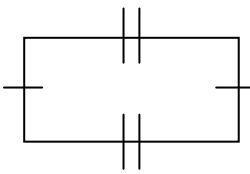
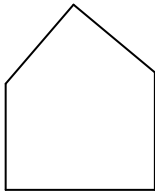
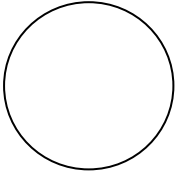
$\therefore$  The order is 0.2, 0.4, 0.6

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

### **LESSON 31**

**THEME: GEOMETRY**

**SUBTOPIC : 2 Dimensional Geometry**

Triangle	Square	Rectangle	Pentagon	Circle
				

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

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

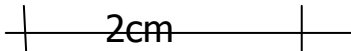
### **LESSON 32**

**TOPIC: GEOMETRY**

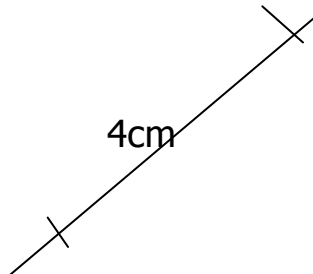
**SUB TOPIC: DRAWING LINES**

1. Draw lines of the following lengths

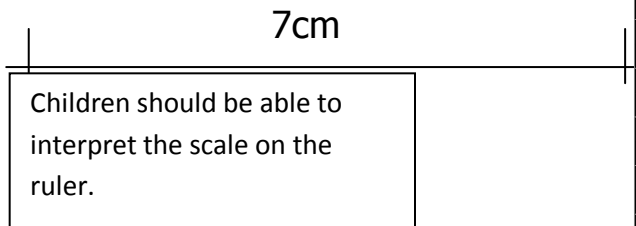
a) 2cm



c) 4 cm



b) 7cm



Activity: Teachers collection

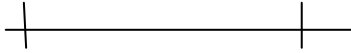
### **LESSON 33**

Emphasize accuracy while measuring line and interpreting scales.

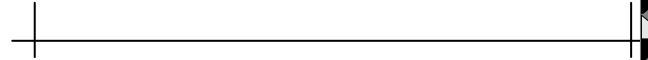
**TOPIC: GEOMETRY****SUB TOPIC: measuring line segments**

1. Use a ruler to measure the following line segments

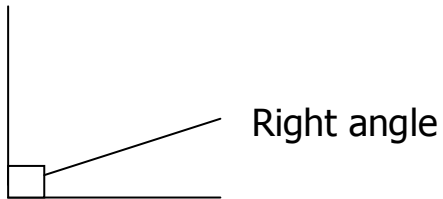
a)



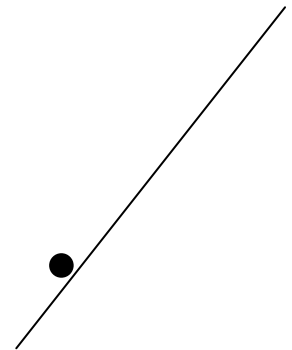
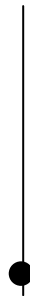
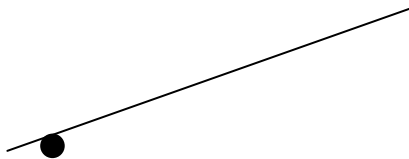
b)

**LESSON 34****TOPIC: GEOMETRY****SUB TOPIC: identifying and drawing a right angle using a ruler and a set square**

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



Copy and draw a right angle at the given point

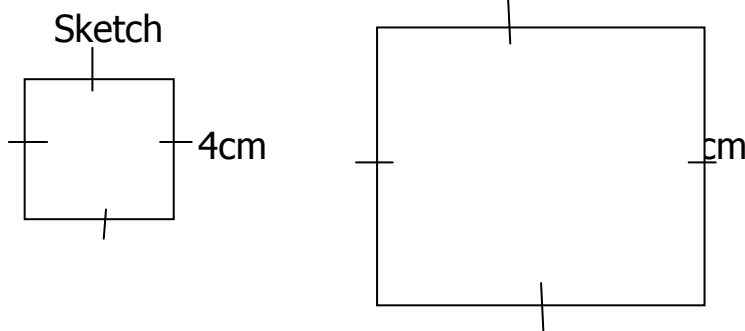


Activity :Pg 98 , A new Mk 20000 bk 4

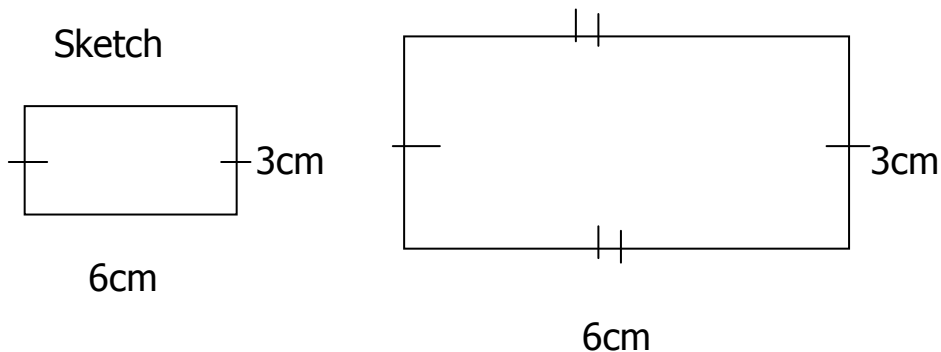
**Note:** Use the protractor

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

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



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



Activity: Exercise pg93 , A new Mk 2000 bk 4

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

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



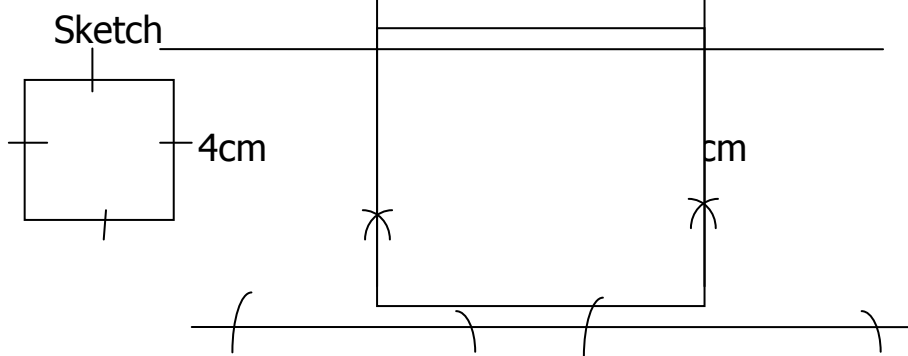
Activity: pg 93 A new Mk 2000 bk 4

## LESSON 37

### TOPIC: 2 dimensional figures

#### SUB TOPIC: constructing a square

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



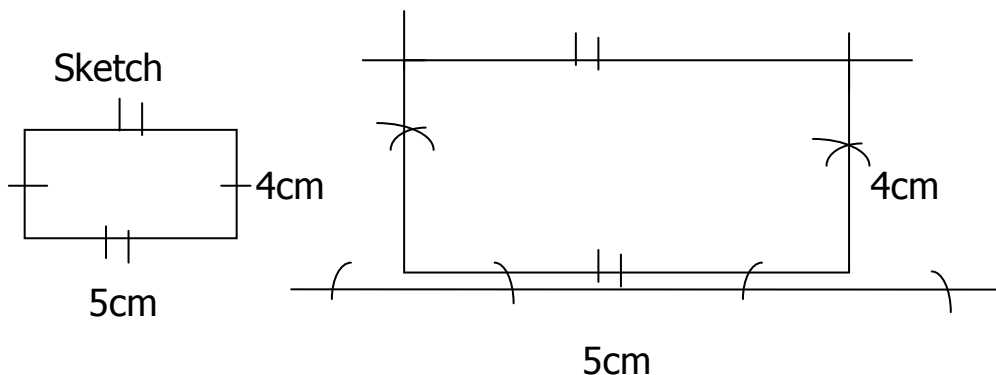
Activity: pg 93 A new Mk 2000 bk 4

## LESSON 38

### TOPIC: 2 dimensional figures

#### SUB TOPIC: construction of a rectangle

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



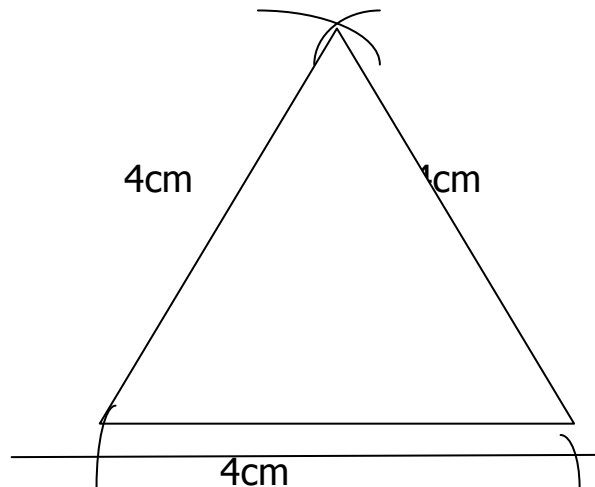
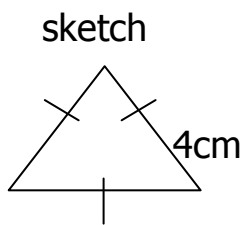
Activity pg 94 new Mk 2000 bk 4

## LESSON 39

**TOPIC: 2 dimensional figures**

**SUB TOPIC: construction of an equilateral triangle**

1. construct an equilateral triangle of sides 4cm



Activity: pg 95 new Mk 2000 bk 4

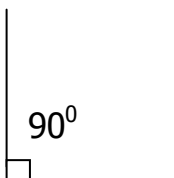
## LESSON 40

**TOPIC : 2 Dimensional figures**

**SUBTOPIC : Drawing and measuring angles using a protractor**

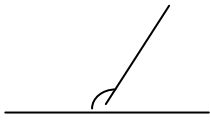
**CONTENT :** Using a ruler, pencil and a protractor, draw the following angles.

- (a) (b)  $45^\circ$  (c)  $60^\circ$  (d)  $30^\circ$

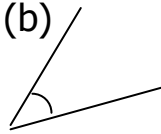


ACTIVITY: Using a protractor, measure the following angles.

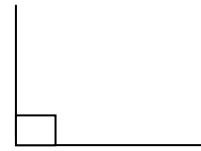
(a)



(b)



(c)



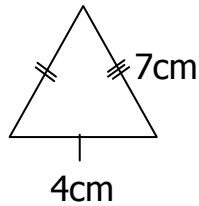
### **LESSON 41**

**TOPIC : 2 Dimensional figures**

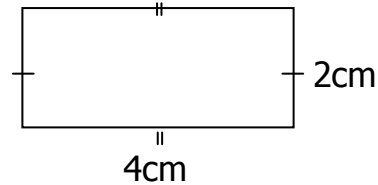
**SUBTOPIC : finding perimeter of 2-dimensional shapes**

1. Find the perimeter of the following:-

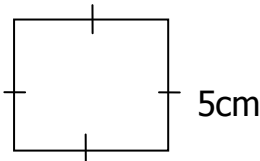
(a)



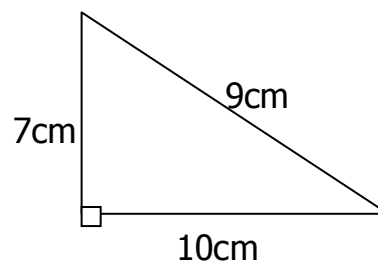
(b)



(c)



(d)

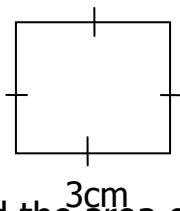


### **LESSON 42**

**TOPIC : 2 Dimensional figures**

**SUBTOPIC : Find the area of a square**

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



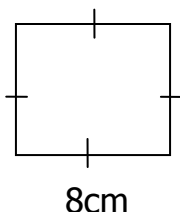
Find the area of:

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

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

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

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



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

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

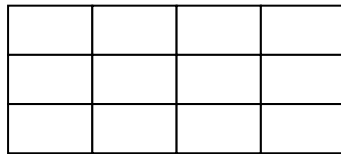
$$= 64\text{cm}^2$$

ACTIVITY: Exercise 12a page 210.

**LESSON 43**

**TOPIC :** 2 Dimensional figures  
**SUBTOPIC :** Find the area of a rectangle.

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



4cm

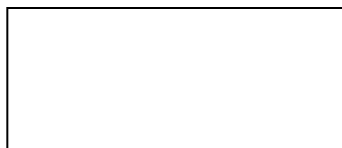
3cm

$$A = L \times W$$

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

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

2. Workout the area of the rectangle below



3cm

6cm

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

**LESSON 44**

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

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

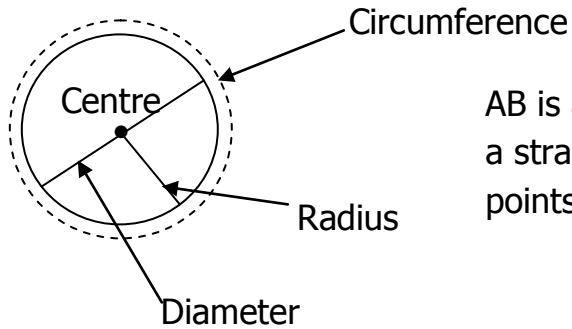
- Hard papers / circular objects.
- Strings
- The big toe
- A pair of compasses

ACTIVITY: Exercise will be given.

- Draw a circle using
  - \* a circular object

\* a pair of compasses.



**LESSON 45****TOPIC : 2 Dimensional figures****SUBTOPIC : Parts of a circle. (Naming)****CONTENT :** Parts shown on circles

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

ACTIVITY: Exercise 7e page 130

**LESSON 46****TOPIC : 2 Dimensional figures****SUBTOPIC : Finding the diameter when given the radius.****CONTENT :** Example

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

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

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

$$= 6 + 6 = 12\text{cm}$$

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

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

$$= 9 + 9 = 18\text{cm}$$

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

$$= 10 + 10 = 20\text{cm}$$

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

**LESSON 47****TOPIC : 2 Dimensional figures****SUBTOPIC : Finding the radius when given the diameter.****CONTENT :** Example

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

Radius = Diameter

$$= \frac{12}{2} = 6\text{cm.}$$

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

**LESSON 48****TOPIC : 2 Dimensional figures****SUBTOPIC : Polygons. (Drawing and naming polygons)****CONTENT :** Examples of common polygons.



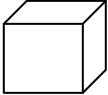
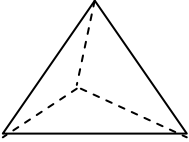
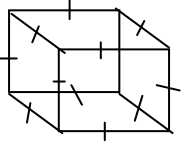
Name	Number of sides
Triangle	3
Quadrilateral	4
Pentagon	5
Hexagon	6

ACTIVITY: Exercise on page 136 Mk bk 4

**LESSON 49****TOPIC : 3 Dimensional Figures**

**SUBTOPIC : Identifying and naming 3 dimensional figures.**

**CONTENT :** Solid shapes.

Geometric solid shapes	Name
	Cone
	Cylinder
	Cuboid
	Triangular Pyramid
	Cube

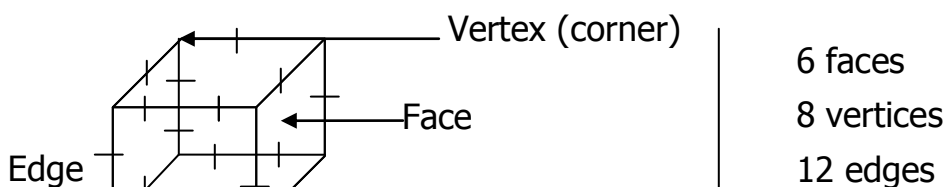
ACTIVITY: Exercise 7b page 126. MK bk 4

### **LESSON 50**

**TOPIC : 3 DIMENSIONAL GEOMETRY**

**SUBTOPIC : Naming parts of the solid shapes**

**CONTENT :** Cube.

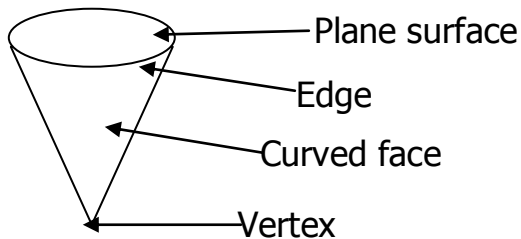


6 faces

8 vertices

12 edges

Cone



2 faces  
1 vertex  
1 edge

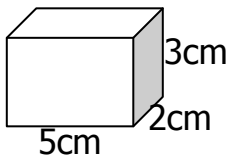
ACTIVITY: Exercise 7c page 127

## **LESSON 51**

**TOPIC : 3 DIMENSIONAL GEOMETRY**

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

**CONTENT :** Example:



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

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

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

Area of the shaded part

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

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

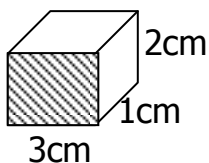
$$\underline{= 6\text{cm}^2}$$

ACTIVITY: Exercise will be given like:

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

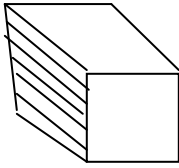
(i) Find the volume.

2.



(ii) Find the area of the shaded part.

3.



- (i) Find the Area of the shaded part.
- (ii) Find the volume

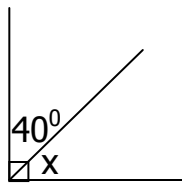
Refer to exercise 12a page 220 MK bk 4 (Old Edition)

### **LESSON 52**

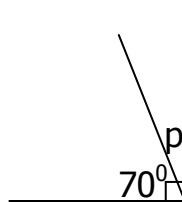
**TOPIC :** 3 DIMENSIONAL GEOMETRY

**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



$$\begin{aligned}x + 40^{\circ} &= 90^{\circ} \\x + 40^{\circ} - 40^{\circ} &= 90^{\circ} - 40^{\circ} \\x &= 90^{\circ} - 40^{\circ} \\x &= 50^{\circ}\end{aligned}$$



$$\begin{aligned}P + 70^{\circ} &= 90^{\circ} \\P + 70^{\circ} - 70^{\circ} &= 90^{\circ} - 70^{\circ} \\P &= 90^{\circ} - 70^{\circ} \\P &= \underline{\underline{20^{\circ}}}\end{aligned}$$

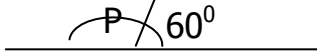
ACTIVITY: Exercise 7k page 139 Mk bk 4

### **LESSON 53**

**TOPIC :** 3 DIMENSIONAL GEOMETRY

**SUBTOPIC : Straight angles or supplementary angles of only two angles**

**CONTENT :** Find the value of angle P.

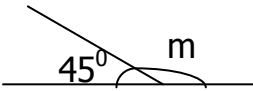


$$P + 60^{\circ} = 180^{\circ}$$

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

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

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



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

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

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

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

ACTIVITY: Exercise 7p Page 142.

**LESSON 54**

**TOPIC : GRAPHS AND DATA INTERPRETATION**

**SUBTOPIC : Tallies**

**CONTENT :** Complete the tally marks

$\text{HHH III} = 8$ ,  $\text{HHH HHH} = 10$ ,  $\text{HHH HHH III} = 13$ ,  $\text{HHH HHH HHH HHH IIII I} = 26$

$\text{IIII IIII} = 9$

Making tally marks. — — —

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

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

ACTIVITY: Exercise 6a page 106

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

Days of the week	White	Red	Black	Maroon
Monday	###	### ///	//	///
Tuesday	### /	### //	### //	/
Wednesday	### ### /	/	///	### ////
Thursday	### /	///	###	### ###

(a) How many cars were seen on Monday?

18 cars were seen on Monday

(b) Which colour appeared most?

White colour appeared most.

ACTIVITY: Exercise 6b page 107

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

     	Doreen
  	Diana
   	Daphine
  	Daizy

Scale. =  5 balls.

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

Diana and Daizy picked the same number of balls.

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

Doreen = 30, Daphine 20

=  $30 + 20 = 50$

Doreen and Daphine picked 50 balls.

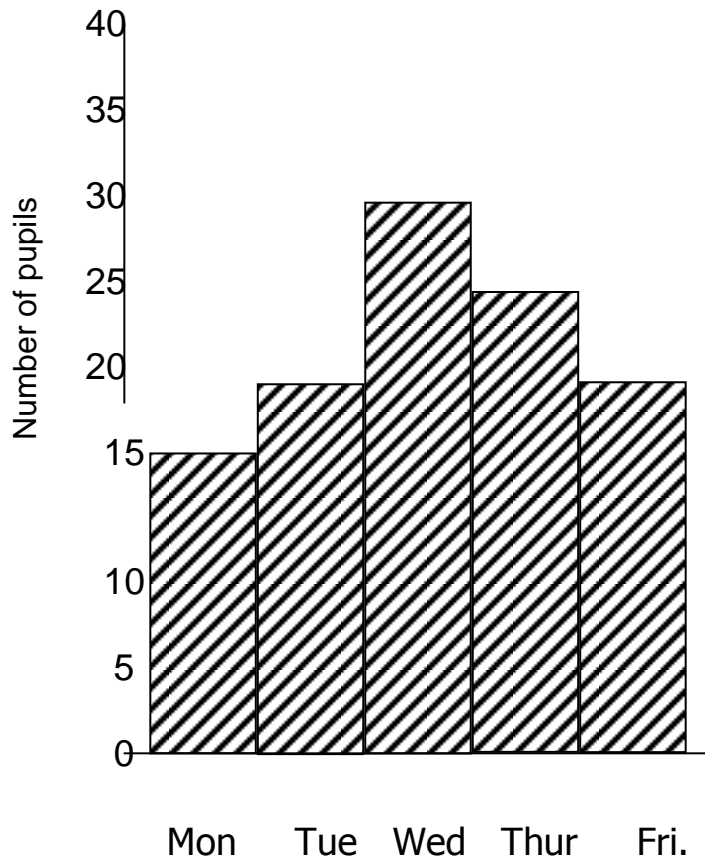
ACTIVITY: Exercise 6f page 111 and 112.

### **LESSON 57**

**TOPIC :** **GRAPHS**

**SUBTOPIC :** **Bar graphs**

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





### Days

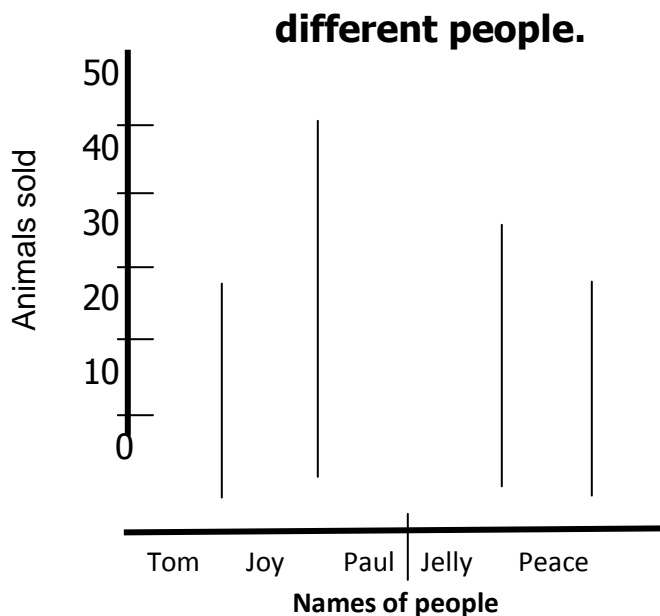
- (a) How many pupils were present on Thursday?  
Thirty pupils were present on Thursday
- (b) On which day was the biggest number of children present?  
 On Wednesday, there was the biggest attendance.

ACTIVITY : Activity 6g page 113 Mk bk 4

### **LESSON 58**

**TOPIC : LINE GRAPHS**

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



- (a) How many animals did Joy sell?

Joy sold 50 animals.

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

Jelly sold 40, Peace sold 30

$$40 + 30 = 70$$

They sold 70 animals.

### P.4 MATHEMATICS TERM III

#### **LESSON 1**

**TOPIC : MONEY**

**SUBTOPIC : Recognition of money  
Finding the value of small denominations**

**CONTENT :**

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

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

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

#### **LESSON 2**

**TOPIC : MONEY (measurements)**

**SUBTOPIC : Addition of money**

**CONTENT :** Example: A man had 4800/= and he was given sh. 1200 by his

friend. How much money did he have altogether?

Sh. 4800

+ Sh. 1200

Sh. 6000

A man had sh. 6000 altogether.

ACTIVITY: Exercise 8b page 149 MK 4

### **LESSON 3**

**TOPIC :** MONEY (Measurements)

**SUBTOPIC :** Subtraction of money

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

You had sh. 1000

You spent sh. 350

Sh. 650

ACTIVITY: Exercise 8c page 150 of MKbk4

### **LESSON 4**

**TOPIC :** MONEY (Measurements)

**SUBTOPIC :** Multiplication of money

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

Shs 1800

x 3

Sh. 5400

ACTIVITY: Exercise 8d page 151 of MKbk4

### **LESSON 5**

**TOPIC :** MONEY (Measurements)

**SUBTOPIC :** Buying and selling (Shopping Bills) (Price list)

**CONTENT :** Example

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

### **Questions**

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

ACTIVITY: Exercise page 152 (Mk New Edition)

### **LESSON 6**

**TOPIC : MONEY (Measurements)**

**SUB TOPIC: Shopping Bills**

**CONTENT :** Example 1

Mariam went to the school canteen and bought the following items

3 chaps at 500/= each.

4 chapats at 800/=

1 bottles of soda at 1000/= each.

- (a) Find her total expenditure.
- (b) Find her balance if she went with 8000/=

### **Working**

Chaps

500=

x3

Chapatis

800=

x 4

Soda

1000=

x 2

15003200=2000=

Total expenditure

Sh. 3200

1500

+ 2000Sh. 6700

Balance= Sh. 8000

- 6700Sh. 1300

ACTIVITY: Teachers collection.

**LESSON 7****TOPIC : MONEY (Measurements)****SUBTOPIC : Division of money**

CONTENT : Example

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

4 books cost - 1200/=

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

ACTIVITY: Exercise 81 page 153 (Mk new Edition)

**LESSON 8****TOPIC : MONEY (Measurements)****SUBTOPIC : Finding profit**

CONTENT : Profit = selling price – buying price/ cost price

Example: Abdul bought a shirt at sh. 800

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

Buying price Sh. 800

Selling price Sh. 1000

Profit = S.P – B.P

= Sh. 1000 – 800

= Sh. 200

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

**LESSON 9****TOPIC : MONEY (Measurements)****SUBTOPIC : Finding Loss**

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

Calculate his loss.

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

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

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

$$= 1200/=$$

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

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

**LESSON 10****TOPIC : MONEY (Measurements)****SUBTOPIC : Postage rates**

**CONTENT :** Study this table.

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

**Example:**

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

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

3 letters to Tanzania will pay shs.  $400 \times 3 =$  sh. 1200

Total Cost = Sh. 2000

Therefore, Joseph will pay 2000/=

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

**LESSON 11**

**TOPIC : TIME**

**SUBTOPIC : Telling time**

CONTENT : Show the following time on a clock face.

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

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

**LESSON 12**

**TOPIC : TIME**

**SUBTOPIC : Changing hours to minutes**

CONTENT : Examples

(a) Change 4hrs to minutes

1 hr = 60 minutes

4 hrs =  $(4 \times 60)$  minutes

240 minutes

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

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

1hr = 60 min

3 hrs =  $(3 \times 60)$  minutes

180 minutes

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

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

Exercise 9b page 163 of MK bk 4

### **LESSON 13**

**TOPIC : TIME**

**SUBTOPIC : Writing the time in hours and minutes**

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

$$\begin{array}{r} 1r10 \\ 60 \overline{)70} \\ \underline{60} \\ 10 \end{array}$$

70 minutes = 1 hour 10 minutes.

ACTIVITY: Exercise 9c page 163 of Mk bk 4

### **LESSON 14**

**TOPIC : TIME**

**SUBTOPIC : Word problems on changing minutes to hrs**

**CONTENT :** Examples: A lesson took 140 minutes  
How long was that lesson in hours.

**Solution:** 60 minutes = 1hr

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

So, 140 minutes = 2 hrs 20 minutes.

ACTIVITY: Exercise 9d page 164 of MK bk 4

### **LESSON 15**

**TOPIC : TIME**

**SUBTOPIC : Addition of time**

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



$$\begin{array}{r}
 3 \quad 40 \quad 70 \quad 1^1 \quad 50 \quad 65 - 60 = 05 \\
 + 4 \quad 30-602 \quad 15 \\
 \hline
 8 \quad 10 \quad 10 \quad 3 \quad 05
 \end{array}$$

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

## **LESSON 16**

**TOPIC : TIME**

**SUBTOPIC : Word problems of addition of time**

CONTENT : Examples:

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

$$\begin{array}{r}
 \text{HRS} \quad \text{MIN} \\
 2 \quad 40 \\
 + 1 \quad 45 \\
 \hline
 4 \quad 25
 \end{array}$$

$$85 \div 60$$

$$= 1\text{r}25$$

ACTIVITY: Exercise 9f page 167 of Mk bk 4

## **LESSON 17**

**TOPIC : TIME**

**SUB TOPIC: Subtraction of time**

CONTENT : Examples

$$\begin{array}{r}
 \text{(a) Hrs} \quad \text{Min} \\
 3 \quad 80 \\
 4 \quad 20 \\
 - 1 \quad 50 \\
 \hline
 1 \quad 30
 \end{array}$$

$$\begin{array}{r}
 \text{(b) HrsMin} \\
 2 \quad 85 \\
 3 \quad 25 \\
 - 1 \quad 45 \\
 \hline
 1 \quad 40
 \end{array}$$

ACTIVITY: Exercise 9g page 168 Mk bk 4

### **LESSON 18**

**TOPIC : TIME**

**SUBTOPIC : Word problems of time (Subtraction)**

**CONTENT :**

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

Total time at school	4	80
Total time at school	=	5hrs 20min
Time spent playing	-	1hr 30min
Time in class	=	3 50

ACTIVITY: Exercise 9h page 169 of Mk bk 4

### **LESSON 19**

**TOPIC : TIME**

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

**CONTENT :** Examples

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

5 O'clock = 6:00a.m

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

8 O'clock = 8:00p.m

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

### **LESSON 20**

**TOPIC : TIME**

**SUBTOPIC : Finding duration**

**CONTENT :** Luyiga walked from her home at 7:15a.m and reached school at

8:15a.m. How long did it take her?

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

So, she took 1 hour.

ACTIVITY: Exercise 9m page 176 of Mk bk 4

## **LESSON 21**

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

CONTENT : Examples  
 How many hours are in 5 days?  
 1 day = 24 hours  
 5 days = 2 4 hrs  

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

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

## **LESSON 22**

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

$$\begin{array}{r} \nearrow 2 \\ 72\text{hrs} = 3 \text{ hours.} \end{array}$$

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

**LESSON 23****TOPIC : TIME****SUBTOPIC : Changing weeks to days****CONTENT :** Examples: How many days are in 8 wks?

$$1\text{wk} = 7\text{days}$$

$$8\text{wks} = 8 \times 7 \text{ days}$$

$$= 56\text{days}$$

ACTIVITY: Exercise 9p page 178 of MK bk 4

**LESSON 24****TOPIC : TIME****SUBTOPIC : Changing days to weeks****CONTENT :** Examples: How many weeks are there in 63 days?

7 days make 1 week

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

$$= 9 \text{ weeks}$$

ACTIVITY: Exercise 9q page 178 of MK bk 4

**LESSON 25****TOPIC : TIME****SUBTOPIC : Addition of time in weeks and days****CONTENT :** (a) Wks Days

$$\begin{array}{r} 1 \quad 3 \\ + 2 \quad 5 \\ \hline 4 \quad 1 \end{array}$$

$$\begin{array}{r} 1 \quad 3 \\ + 2 \quad 5 \\ \hline 4 \quad 1 \end{array}$$

$$\begin{array}{r} 1 \quad 3 \\ + 2 \quad 5 \\ \hline 4 \quad 1 \end{array}$$

$$8 \div 7 = 1\text{r}1$$

- (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
10	4

$11 \div 7 = 1r4$

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

## **LESSON 26**

**TOPIC :** TIME  
**SUBTOPIC :** Subtraction of time in wks and days

**CONTENT :** Example:

Wks	Days
3 <sup>2</sup>	2 <sup>9</sup>
- 1	5
1	4

ACTIVITY: Exercise 9t page 182 of Mk bk 4

## **LESSON 27**

**TOPIC :** measure  
**SUBTOPIC :** months of the year

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

Interpretation of calendars

Activity: pg150 , a new Mk 2000 bk

## **LESSON 28**

**TOPIC :** measure  
**SUBTOPIC :** converting years into months

1. Change 3 years into months

1 year = 12 months

3 years = (3x12) months  
= 36 months

Activity: pg 151, a new Mk bk 4

## **LESSON 29**

**TOPIC : measure**

**SUBTOPIC : converting months to years**

1. Our baby is 24 months old. How old is she in years?

12 months = 1 year

24 months = (24÷2) years  
= 2 years

Activity: pg 152 a new Mk bk 4

## **LESSON 30**

**TOPIC : measure**

**SUBTOPIC : converting months to days**

1. How many days are there in the first two months of the year?

Jan = 31 days

Feb = 28 days

Total = 59 days

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

Activity: pg 153 a new Mk bk 4

## **LESSON 31**

**TOPIC : LENGTH, MASS AND CAPACITY**

**SUBTOPIC : Addition in metres and centimeters**

**CONTENT :** Examples

Add: 2m 45cm

+ 6m 36cm

Add: 8m 25cm

+ 6m 85cm

ACTIVITY: Exercise 10d page 187 MK book 4.

## LESSON 32

**TOPIC : LENGTH, MASS AND CAPACITY**

**SUBTOPIC : Addition in metres and centimeters in word problem**

**CONTENT :** Example 1

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

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

ACTIVITY: Exercise 10e page 188.

## LESSON 33

**TOPIC : MEASURES (Length)**

**SUBTOPIC : Subtraction of metres and centimetres**

CONTENT : Example 1

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

$$\begin{array}{r} \text{Subtract :} \quad \text{M} \quad \text{CM} \\ 80 \quad 24 \quad 100+24=124 \\ - 5 \quad 30 \\ \hline 3 \quad 94 \end{array}$$

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

### LESSON 34

TOPIC : LENGTH, MASS AND CAPACITY

SUBTOPIC : Subtraction of metres and centimeters in word problem

CONTENT : Example 1

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

$$\begin{array}{r} \text{M} \quad \text{CM} \\ \text{Otim had} \quad 15 \quad 36 \\ \text{He cut off} \quad - 9 \quad 21 \\ \hline 6 \quad 15 \end{array}$$

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

$$\begin{array}{r} \text{M} \quad \text{CM} \\ \text{His string measured} \quad 25 \quad 15 \\ \text{He cut off} \quad - 18 \quad 35 \\ \hline \text{Length of the string left} \quad 6 \quad 80 \end{array}$$

$$\begin{array}{r} \text{Subtract:} \quad \text{M} \quad \text{CM} \\ 9 \quad 24 \\ - 5 \quad 30 \\ \hline 3 \quad 94 \end{array}$$

ACTIVITY: Exercise 10g page 189.



**LESSON 35****TOPIC : LENGTH, MASS AND CAPACITY****SUBTOPIC : Changing kilometers into metres****CONTENT :** Example 1

Example 1

Change 5km to metres.

$$1\text{km} = 1000\text{m}$$

$$5\text{km} = 5 \times 1000$$

$$= 5000\text{m}$$

$$\therefore 5\text{km} = \underline{5000\text{m}}$$

Example II

Change 12km to metres.

$$1\text{km} = 1000\text{m}$$

$$12\text{km} = 12 \times 1000$$

$$= 12000\text{m}$$

$$\therefore 12\text{km} = \underline{12000\text{m}}$$

**ACTIVITY:** Exercise 10m and 10n page 195.**LESSON 36****TOPIC : LENGTH, MASS AND CAPACITY****SUBTOPIC : Changing metres to kilometers****CONTENT :** Example 1

Change 3000m to km

Since  $1000\text{m} = 1\text{km}$ 

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

**ACTIVITY:** Exercise 10j page 193**LESSON 37****TOPIC : LENGTH, MASS AND CAPACITY****SUBTOPIC : Writing as kilometers and metres****CONTENT :** Example 1

Write 800m as km and m

KM	HM	DM	M
	8	0	0

= 0 Km 800m  
or 0.8km

Example II

Write 7430m as km and m

KM	HM	DM	M
7	4	3	0

= 7km 430m  
Or 7.43km.

ACTIVITY: Exercise 10k page 193 (New Edition)

### LESSON 38

**TOPIC : LENGTH, MASS AND CAPACITY**

**SUBTOPIC : Addition of long distances**

CONTENT : Example 1

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

Km	m
15	880
+ 6	750
<u>22</u>	<u>630</u>

Add: Km	m
13	530
+ 8	670
<u>22</u>	<u>200</u>

ACTIVITY: Exercise 10p page 197

### LESSON 39

**TOPIC : LENGTH, MASS AND CAPACITY**

**SUBTOPIC : Subtraction of long distances**

CONTENT : Example 1

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

Example 2

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

ACTIVITY: Exercise 10q page 198

**LESSON 40****TOPIC : LENGTH, MASS AND CAPACITY****SUBTOPIC : Half and quarter litres**

CONTENT : Example

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

1 litre = 2 half litres

10 litres= 10 x 2 half litres

= 20 half litres.

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

1 litre= 4 quarter litres

20 litres = (4 x 20) quarter litres

= 80 quarter litres.

ACTIVITY: Exercise 13a pages 223 and 224.

**LESSON 41****TOPIC : LENGTH, MASS AND CAPACITY****SUBTOPIC : Addition of litres and half litres**

CONTENT : Example.

Add 12 litres + 20 litres

12litres

+20litres32litres2. Add 1  $\frac{1}{2}$  litres + 2  $\frac{1}{2}$  litres

ACTIVITY: Exercise13b pages 224-225 MKbk 4 old edition

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

Change 5 litres to millilitres

1 liter = 1000ml

5litres = (5x1000) ml

= 5000ml

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

Express 4000ml to litres

1000 ml = 1 litre

4000ml = 4000

1000= 4 litres activity: pg184 .new Mk bk 4**LESSON 44****TOPIC : LENGTH, MASS AND CAPACITY****SUBTOPIC : Changing kilograms to grams**

CONTENT : Example

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

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 =  $\frac{4}{5} \times 1000$ g= 800g

ACTIVITY: Exercise 14c page 230 of Mk bk 4

**LESSON 45****TOPIC : LENGTH, MASS AND CAPACITY**

**SUBTOPIC : Changing grams to kilograms**

CONTENT : Example

(a) Change 2000g into kg

$$1000g = 1kg$$

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

$$= \underline{2kg}$$

(b) Change 4500g into kg.

$$1000g = 1kg$$

$$4500g = \frac{4500}{1000} = \underline{\underline{\frac{45}{10}}}$$

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

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

**LESSON 46**

**TOPIC : LENGTH, MASS AND CAPACITY**

**SUBTOPIC : Addition of kilograms and grams**

Example II

Add: 104kg 420g + 187kg 350g

CONTENT : Example

Add: Kg g

2 250

+ 3 150

5kg 400g

Kg g

104 420

+187 350

291 770

ACTIVITY: Exercise 14e page 231

**LESSON 47**

**TOPIC : LENGTH, MASS AND CAPACITY**

**SUBTOPIC : Addition of kilograms and grams in word problems**

CONTENT : Examples

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

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

ACTIVITY: Exercise 14g page 232

## LESSON 48

TOPIC : LENGTH, MASS AND CAPACITY

SUBTOPIC : Subtraction of kilograms and grams

CONTENT : Examples

Subtract	:	Kg	g
		75	640
-		28	450
		<u>47</u>	<u>190</u>

Subtract 59kg 423g – 39kg 651

	Kg	g
	59	423
-	39	651
	<u>19</u>	<u>772</u>

ACTIVITY: Exercise 14h page 234

## LESSON 49

TOPIC : LENGTH, MASS AND CAPACITY

SUBTOPIC : Subtraction of kilograms and grams in word problems.

CONTENT : Example

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

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

ACTIVITY: Exercise 141 page 234 MK bk 4

### **LESSON 1**

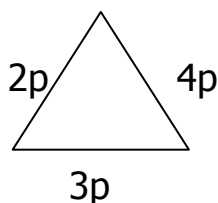
**TOPIC :** ALGEBRA

**SUBTOPIC :** addition of letters for numbers

**CONTENT :** example I

1. Add  $m + m + m + m$   
 $m + m + m + m = \underline{3m}$
2. Simplify  $2y + y + 3y$   
 $2y + 3y + y = \underline{6y}$

3. Find the perimeter of the figure



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

Activity ☹Exercise 16 Mk bk 4 pg 250

### **LESSON 2:**

**TOPIC :** ALGEBRA

**SUBTOPIC :** Subtraction of letters for numbers

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

Activity: Exercise 5k pg 252 Mk 4 old edition

### **LESSON 3:**

**TOPIC :** ALGEBRA

**SUBTOPIC :** collecting like terms involving addition only

1. Collect like terms

a)  $2k + 5m + k$

$(2k+k) + 5m$

$3k + 5m$

b)  $7x + 10y + 2x + y$

$7x + 2x + 10y + y$

$9x + 11y$

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)

$$\square - 4 = 6$$

(b)  $y - 7 = 21$



$$-4 + 4 = 6 + 4$$

$$= 10$$

$$y - 7 + 7 = 21 + 7$$

$$y = 28$$

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)  $5c + 4c + 3c = 12c$

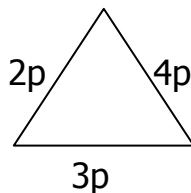
ACTIVITY: Exercise 16h Mk Bk4 pg. 250

### **LESSON 8**

**TOPIC : ALGEBRA**

**SUBTOPIC : Finding perimeter using unknowns**

CONTENT : Find the perimeter of this figure below:-



$$\text{Perimeter} = s + s + s$$

$$= 3p + 4p + 2p$$

$$\underline{\text{Perimeter} = 9p}$$

ACTIVITY: Exercise 16 MkBk 4 pg. 250

### **LESSON 9**

**TOPIC : ALGEBRA**

**SUBTOPIC : Collecting more like terms**

**CONTENT :** Example:

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

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

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

### **LESSON 10**

**TOPIC : ALGEBRA**

**SUBTOPIC : Collecting like terms (addition and Subtraction)**

**CONTENT :** Example:

$$\begin{aligned} \text{(a) Collect like terms} \\ &= 9d + 4c - 3c \\ &= \underline{9d + c} \end{aligned}$$

$$\begin{aligned} \text{(b) Collect like terms} \\ &= 6a + a - m \\ &= \underline{7a - m} \end{aligned}$$

CTIVITY: Exercise 5k page 252

### **LESSON 11**

**TOPIC : ALGEBRA**

**SUBTOPIC : SUBSTITUTION**

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

$$\begin{aligned} \text{(i) } P + 4 &= 3 + 4 \\ &= 7 \end{aligned}$$

ACTIVITY: Exercise 16m Mk pg. 253

### **LESSON 12**

**TOPIC : ALGEBRA**

**SUBTOPIC : MORE SUBSTITUTION**

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

$$\begin{aligned} \text{(a) } &= x + y + z \\ &= 3 + 4 + 5 \end{aligned}$$

$$\begin{aligned} \text{(b) } &xyz \\ &= x \times y \times z \\ &= 3 \times 4 \times 5 \end{aligned}$$

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

ACTIVITY: Exercise 16n Mkbk 4 pg. 253

### **LESSON 13**

**TOPIC :** ALGEBRA

**SUBTOPIC :** Solving equations involving addition

**CONTENT :** Example:

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

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

$$\square = 6$$

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

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

$$y = 6$$

ACTIVITY: Exercise 16d Mk bk4 page 247

### **LESSON 14**

**TOPIC :** ALGEBRA

**SUBTOPIC :** Solving equations involving subtraction

**CONTENT :** Example:

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

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

$$\square = 8$$

$$(b) y - 4 = 7$$

$$y - 4 + 4 = 7 + 4$$

$$y = 11$$

ACTIVITY: Exercise 16e Mk bk 4 page 247

### **LESSON 15**

**TOPIC :** ALGEBRA

**SUBTOPIC :** Solving equations involving multiplication

**CONTENT :** Examples.

$$(a) 3p = 21$$

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

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

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

**LESSON 16****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 Mkbk 4 page 256

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

Example:

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

Let the number be  $n$ .

$n + 3 = 14$

$n + 3 - 3 = 14 - 3$

$n = 11$

 $\therefore$  The number is 11.

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

Let the number be  $y$ 

$y - 3 = 17$

$y - 3 + 3 = 17 + 3$

$y = 20$

 $\therefore$  the number is 20.

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

**LESSON 18**

**TOPIC : ALGEBRA**

**SUBTOPIC : Forming and solving equations**

**CONTENT :** Multiplication and division

Example:

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

Let the number of each group be  $n$

$$4 \times n = 40$$

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

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

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

REMARKS