

# PRIMARY WORK BOOK

## ESSENTIAL BACK UP TOOL FOR SUCCESS

ESSENTIAL BACK UP TOOL FOR SUCCESS IS A SERIES OF LEARNING THE SOURCE MATERIALS ORGANISED FOR USE AFTER THE TEACHER HAS INTRODUCED AND EXPLAINED THE CONCEPT TO THE LEARNER.

ESSENTIAL BACK UP TOOL FOR SUCCESS COVERS PRIMARY SYLLABUS FROM **PRIMARY ONE TO PRIMARY SEVEN** IN ALL SUBJECT ASPECTS THAT IS ENGLISH, SOCIAL STUDIES, INTEGRATED SCIENCE, MATHEMATICS, LITERACY ( FOR LOWER CLASSES) AND RELIGIOUS EDUCATION.

THIS TOOL IS WELL SUMMARISED WITH RELEVANT EXPLANATIONS, FOLLOW UP EXERCISES AND ACTIVITIES IN LINE WITH TERM ONE WORK AS PRESCRIBED BY THE NATIONAL CURRICULUM DEVELOPMENT CENTER , UGANDA.

EACH OF THE ABOVE ASPECTS HAS A VARIETY OF DIFFERENT FORMS OF ACTIVITIES TO ENHANCE MASTERY.

THIS WORK BOOK IS ORGANISED BY MARKS GATE INTERNATIONAL (MGI) IN CORROBORATION WITH STANDARD HIGH SCHOOL ZZANA (STAHIZA)

THIS TOOL HAS SERIES IN TERMS THAT IS (TERM ONE, TERM TWO, TERM THREE)

**Here in is an extract of the material that compose a whole book. In case you are interested in the complete sets of books, contact; 0772511120/0705283741**

## PRIMARY FIVE MATHEMATICS WORK BOOK TERM ONE.

### EQUIVALENT AND NON – EQUIVALENTS SETS

-Equivalent sets are sets with the same number of elements/members. ( $\longleftrightarrow$ )

-Nonequivalent sets are sets with different number of elements or members. ( $\nleftrightarrow$ )

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

$B = \{4, 6, 7\}$

$C = \{6, 4, 7, 8\}$

$A \longleftrightarrow B$  / Set A is equivalent to set B

$B \nleftrightarrow C$  / Set B and C are non-equivalent

#### ACTIVITY

1. Which of the following pairs of sets are equivalent?

a)  $A = \{ \text{Kato, Wasswa, Okello} \}$   
 $B = \{ \text{Adikini, Amoti, Chandiru} \}$

b)  $C = \{ \text{the letters of the word Uganda.} \}$   
 $D = \{ \text{The letters of the word, Africa} \}$

c)  $E = \{ \text{Odd numbers less than 10} \}$   
 $F = \{ \text{Fish, Meat, clouds} \}$

d)  $J = \{5, 10, 15, 20, 25\}$   
 $K = \{2, 4, 6, 8, 10\}$

2. a). Write equivalent or non-equivalent

$A = \{\text{car, kettle, dog}\}$

$B = \{\text{chair, Jerry can, bottle}\}$

Set A has ----- members and

Set B has ----- members.

Set A and Set B are -----.

b)  $L = \{\text{Pineapple, ball, orange, de=rum}\}$

$M = \{\text{cat, book, pail}\}$

Set L has ----- members and

Set M has ----- members.

Set L and M are -----.

## EQUAL AND NON-EQUAL SETS

-Equal sets are sets with same number of elements which are exactly alike ( $=$ )

-Non-equal sets re sets with the same number of different number of elements not exactly alike ( $\neq$ )

### EXAMPLE

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

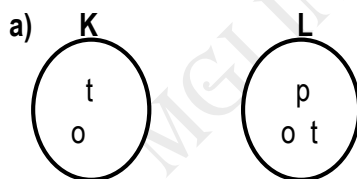
Set A = Set C

$B = \{2, 3, 4\}$

Set B  $\neq$  Set C

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

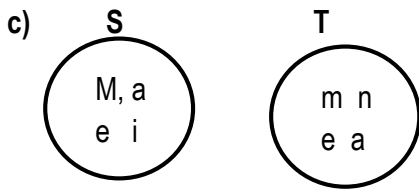
### ACTIVITY



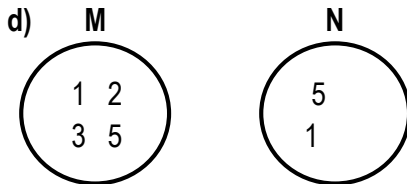
Set K and Set L are -----

b)  $P = \{2, 6, 7\}$      $Q = \{1, 5, 3\}$

Set P and Q are -----



Set S and Set T are -----



Set M and N are -----

2. Which of the following pairs are equal?

a)  $A = \{ a, b, c, d \}$   
 $B = \{ b, c, a, d \}$

b)  $C = \{ \text{cat, dog, rat} \}$   
 $D = \{ \text{rat, dog, cat} \}$

c)  $E = \{ \text{fish, banana, meat} \}$   
 $F = \{ \text{fish, potatoes, meat} \}$

d)  $K = \{ 0, 2, 4, 6 \}$   
 $L = \{ 6, 0, 4, 2 \}$

e)  $P = \{ S, U, N, A \}$   
 $F = \{ E, V, I, L \}$

## EMPTY SET

An empty set is the one without any element in it.

It is also known as a null set.

The symbol  $\emptyset$  is used to mean an empty set.

## EXAMPLE

$A = \{\text{men with 10 heads}\}$

$B = \{\text{goats as big as an elephant}\}$

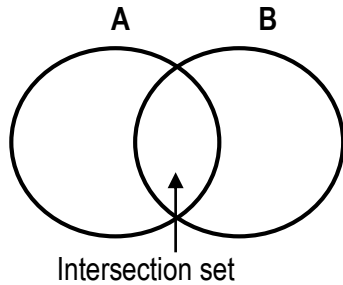
The sets given above are empty.

## ACTIVITY

1. State whether the sets below are empty or not.

- a)  $B = \{\text{girls who are as old as their mothers.}\}$
- b)  $F = \{\text{A cow which can fly like an airplane}\}$
- c)  $K = \{\text{A bull which lays eggs}\}$
- d)  $P = \{\text{An animal which lays eggs}\}$
- e)  $C = \{\text{Birds which produce milk}\}$
- f)  $D = \{\text{Boys in the class who are as old as their brothers}\}$

## INTERSECTION OF SETS



The symbol " $\cap$ " is used to mean intersection.

It is the region / set of common elements

### EXAMPLE

1.  $Q = \{a, b, c, d, e, f\}$   
 $P = \{a, e, l, o, u\}$   
Find  $P \cap Q$   
 $= \{a, e\}$

2.  $K = \{e, q, a, t\}$   
 $L = \{e, q, u, a, l\}$   
Find  $K \cap L$   
 $= \{e, q, a\}$

### ACTIVITY

Find the intersection of the following pair of sets.

- a)  $A = \{\text{book, pen, table, chair}\}$   
 $C = \{\text{hat, shorts, shirts}\}$
- b)  $B = \{\text{house, bed, table, mat, chair}\}$   
 $D = \{\text{jacket, shirt, coat}\}$
- c)  $E = \{1, 3, 5, 7, 9, 11\}$   
 $G = \{a, e, l, o, u\}$

d)  $F = \{1, 2, 5, 8, 9, 10\}$   
 $H = \{a, r, c, h, e\}$

e)  $K = \{O, \Delta, \square\}$   
 $L = \{\Delta, \square, \text{rectangle}\}$

### INTERSECTION, UNION OF SETS AND VENN DIAGRAM.

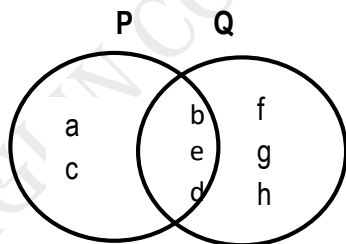
#### EXAMPLE

1. Study the Venn diagram given and find

- $P \cap Q$
- $P \cup Q$

$$P \cap Q = \{b, e, d\}$$

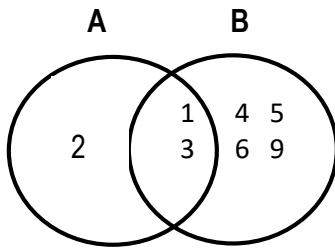
$$P \cup Q = \{a, b, c, d, e, f, g, h\}$$



2. Represent the following sets on a Venn diagram and find;

- $A \cap B$
- $B \cup A$

$$A = \{1, 2, 3\} \quad B = \{9, 3, 4, 5, 1, 6\}$$



$$A \cap B = \{1, 3\}$$

$$A \cup B = \{1, 2, 3, 4, 5, 6, 9\}$$

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**NB:** What you have finished is a **small part** of the material that compose a **whole book**. In case you are **interested** in the complete set of this book, contact; **0772 511 120/ 0705 283 741**