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)

THEME: **SETS**

TOPIC: **SET CONCEPT**

SUBTOPIC: **EQUAL AND EQUIVALENT SETS**

Equal Sets

Equal sets are sets with the same number of elements of the same type. The symbol = is used to denote equal sets.

Example:

1. If set R ={r, a, t} and set P = {t, a, r}

   ∩(R) = 3 members, ∩(S) = 3 members.

   Members of R and S are similar

   Sets R and P are therefore equal sets.

   So we write; **R = P**

N.B: The arrangement of members does not matter provided they are exactly the same.

Equivalent Sets

Equivalent sets are sets with the same number of elements. The members may be different or the same. The symbol for equivalent is ⟷.

Examples:

Set B = {4, 5, 6, 7, 8} and Set C = {a, b, c, d, e}

n (B) = 5 members n (C) = 5 members

Therefore Sets B and C are equivalent since they both have 5 members each.

They can be written as, **B ⟷ C**

ACTIVITY

a) Define equal sets.

b) What are equivalent sets?

c) Given the sets below;

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

Set B = {2, 4, 6, 8, 10, 12, 14}

Set C = {s, n, a, i, l}

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

Set E = {n, a, i, l, s}

Set F is of even numbers between 1 and 15.

Use '**equal**' or '**equivalent**'

a) Set A and Set D

b) Sets A and C

c) Sets B and F

d) Sets E and C

e) Sets D and E

d) Mr. Mulindwa has goats, cows and sheep on his farm and Mr. Mr. Muwonge has sheep, cows and pigs on his farm. Write the sets of the two farms and state either they are equal of equivalent.

SUBTOPIC: UNEQUAL SETS

CONTENT:

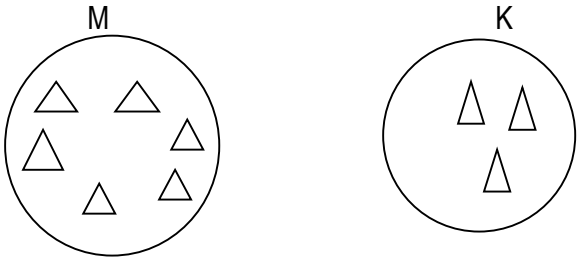
Unequal sets are the sets with different members or different number of members.

N.B: Unequal means not equal.

The symbol for Unequal sets is ≠

Examples:

1.



Set M has 6 members and Set K has 3 members.

Therefore, Sets M and K are Unequal sets

$M \neq K$

2. Set T = {4, 5, 6, 7} and Set R = {a, p, q, k}

   Set T is a set of 4 numbers and Set R is a set of 4 letters.

   Sets T and R are unequal sets because their members are different though they have the same number of elements.

   $T \neq R$

ACTIVITY:

Given the sets below, write equal or unequal.

1. Set P = {0, 2, 4, 6, 8} and Set Q = {8, 2, 4, 6}

   Sets P and Q are _____ sets

2. Set B = {man, woman, boy}

   Set C = {man, woman, girl}

   Sets B and C are _____ sets.

3. Set D is a set of all the months of the year that start with letter J

   Set E = {January, June, July}

   Sets E and D are _____ sets

4. Given that sets F = {  } and G={  }

   Sets F and G are_____sets

SUBTOPIC: INTERSECTION AND UNION SETS

Intersection set

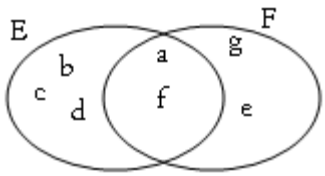
This is a set of common members of given sets.

Union set:

A set of all members in the given sets altogether.

Examples:

Given the venn diagram below,



1. Find E ∩ F

   E ∩ F = {a, f }

b) Find n(E∩F) = 2 members

   E ∩ F = {a, f }

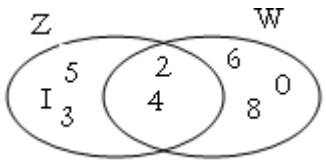
   Hence ∩(E∩F) = 2 members

c) What is E ∪ F?

   E∪F= {a, f, b, c, d, g, e}

2. Given that Set Z ={1, 2, 3, 4, 5} and W={0, 2, 4, 6, 8}.

a) Represent the sets on a Venn diagram.



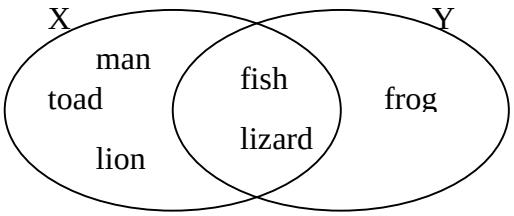
3. Find ∩(Z∪W)

$Z \cup W = \{0, 1, 2, 3, 4, 5, 6, 8\}$

$\underline{\cap(Z \cup W) = 8 \text{ members}}$

ACTIVITY:

a) Use the Venn diagram to answer the questions.



a) Find $X \cap Y$.

b) Find $n(X \cap Y)$.

c) Find $Y \cup X$.

d) What is $n(X \cup Y)$?

2. Given that Set K is a set of all factors of 12 and Set L is a set of all factors of 30.

i. Find $K \cap L$.

ii. Find the union set of K and L.

iii. How many elements are in $L \cup K$?

iv. Find $L \cup K$

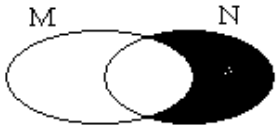
SUB TOPIC : DIFFERENCE OF SETS

Examples:

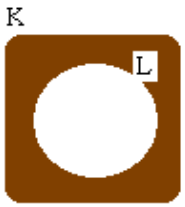
1. Shade N - M on the Venn diagram below.

NB N – M refers to the region for N only.

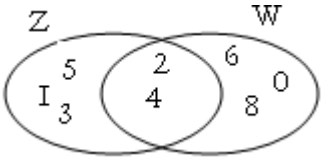
It also means: N - (M∩N)



2. Shade K- L in the sets.



4. Given the Venn diagram below:-



Find W – Z

W – Z = {0, 6, 8}

a. Find n(X - W)

Z – W = {1, 3, 5}

n(Z - W) = 3 members.

5. Given that Set R is a set of all vowel letters in the word “chair” and Set K is a set of all vowel letters in the word “education”.

A) Find K – R

B) Find n(R - K)

solutions

a) Set R = {a, i}

Set K = {a, e, i, o, u}

K - R = {e, o, u}

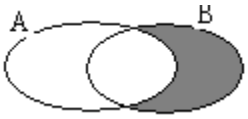
b) n(R - K)

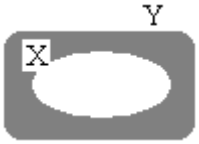
R - K = { }

n(R - K) = 0

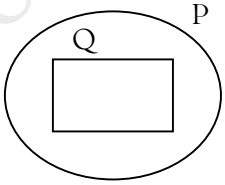
ACTIVITY:

1. Describe the shaded regions





2. Shade P - Q

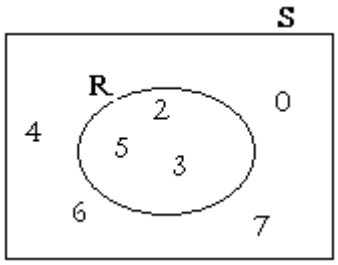


3. Set B = {a, h, k, r, s} Set H = {b, h, t, r, v}.

   i. Find i) H – B

   ii. n(B - H)

4. Study the diagram and answer the questions



   i. List the members of set R

   ii. Find n(S - R)

5. Set T is a set of all multiples of 4 less than 19. Set M is a set of all factors of 24.

   a) Find T – M

   b) Find n(M - T)

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**