# EBIMIIMO BYA KANNAKUBALA (MATHEMATIKA) WA P.L.E NE U.C.E

Biweesebbwa
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## I. EBIMIIMO BYA KANNANSONGA

| | | |
|---|---|---|
| argument | ≡ | **omuwakano** |
| assumption | ≡ | **ekitwale** |
| axiom/ postulate | ≡ | **ekisabo** |
| conjecture | ≡ | **ssetteebelezo** |
| contrapositive | ≡ | $F_a$**●yeeyikkonta** |
| converse | ≡ | **[enkakase ffuulannenge]** |
| corollary | ≡ | **enkakasegonga** |
| counter-example | ≡ | **ekikontano** |
| direct proof | ≡ | **enkakasa nnateleela** |
| fallacy | ≡ | **ekiguumaazo** |
| false | ≡ | $F_{pro}$**●a amazuma** |
| hypothesis | ≡ | **wapiteeko** (thesis ≡ **ekiteeko**) |
| indirect proof | ≡ | **enkakasa nnakkoolooba** |
| intuitive | ≡ | $F_a$**●tasongayibwa** |
| invalid | ≡ | $F_a$**●taafu** |
| lemma | ≡ | **enkakasewansa** |
| logic | ≡ | **kannansonga** |
| necessary condition | ≡ | **[embeela eyeetaagisa]** |
| paradox | ≡ | **ekikkilizolaana** |
| premise | ≡ | **ekitume** |
| proof | ≡ | (i) **ekikakaso** |
| | | (ii) **enkakasa/ okukakasa** |
| proof by contradiction | ≡ | **enkakasa nnakkoolooba** |
| proof by exhaustion | ≡ | **enkakasa nnaggweelela** |
| proof by induction | ≡ | **enkakasa nnassendassenda** |
| reductio ad absurdum | ≡ | **enkakasa nnakkoolooba** |

| | | |
|---|---|---|
| proposition = statement | ≡ | **ekitegeezo; ekyokukakasibwa** |
| self-evident | ≡ | $F_a$●**ejulila** |
| statement | ≡ | **ekitegeezo** |
| sufficient condition | ≡ | **[embeela emmala]** |
| symbol | ≡ | [**akabonelo akeelondele**] |
| theorem | ≡ | **enkakase** |
| true | ≡ | $F_{pro}$●**a amazima** |
| undecidable | ≡ | $F_a$●**tasalikikawo** |
| valid | ≡ | $F_a$●**tuufu** |
| visual proof = ″look - see″ proof | ≡ | **enkakasa nnaddyebula** |

P → Q ″P implies Q″ ≡ [P **kizingwa** Q]

″if P, then Q″ ≡ [**singa** P, **olwo** Q]

″P is a sufficient condition for Q″ ≡ [P **mbeela emmala okuba kwa** Q]

P ← Q ″P is implied by Q″ ≡ [P **kizingwa** Q]/ [Q **kizinga** P]

″P is necessary condition for Q″ ≡ [P **mbeela eyeetaagisa okuba kwa** Q]

″if Q, then P″ ≡ [**singa** Q, **olwo** P]

P ↔ Q ″P if and only if Q″ ≡ [P **singa ela kyokka singa** Q]

″P iff Q″ ≡ [P **ses** Q]

## II. EBIMIIMO BYA KANNABIBINJA

| | | |
|---|---|---|
| (to) enumerate (a set) | ≡ | **okunambabwala (ekibinja)** |
| complement (of a set) | ≡ | **ekibinjamala** |
| denumerable (set) | ≡ | **(ekibinja) ekinambabwalika** |
| disjoint sets | ≡ | **ebibinjawakuta** |
| element = member | ≡ | **ekinnakibinja; mmemba** |

| | | |
|---|---|---|
| empty set | ≡ | **ekibinja ekyeleele** |
| equivalent sets | ≡ | **ebibinja ebiwendonkanyi** |
| finite set | ≡ | **ekibinja ekibalika** |
| infinite set | ≡ | **ekibinja ekitabalika** |
| intersection (of two or more sets) | ≡ | **ekibinjawakata** |
| member (of a set) | ≡ | **ekinnakibinja; mmemba** |
| null set = empty set | ≡ | **ekibinja ekyeleele** |
| proper subset | ≡ | **ekibinjawansayina** |
| set theory | ≡ | **kannabibinja; omuteebelezo gw'ebibinja** |
| set | ≡ | **ekibinja** |
| subset | ≡ | **ekibinjawansa** |
| superset | ≡ | **ekibinjawagwa** |
| symmetric difference (of two sets) | ≡ | **enjawulo empimaganyi** |
| union (of two or more sets) | ≡ | **ekimuyo** |
| universe | ≡ | **ekibinjayanna** |
| universal set | ≡ | **ekibinjayanna** |
| Venn diagrams | ≡ | **ebikobwayima ebinnaVenni** |

## III. OBUBONELO BW'EKINNAKUBALA

\+ "add" or "positive" ≡ **gatta** oba $F_a$•**yeeyi**

**-** "minus" or "subtract" or "negative" ≡ **toolako** oba $F_a$•**neddayi**

~ "find the absolute difference of" ≡ **zuula enjawulo ya** … **ggeleggele**

× "times" or "multiplied by" ≡ **emilundi** oba **yingiyisisa ne**

* "times" or "multiplied by" *Usually used on a computer*

÷ "divided by" or "shared by" ≡ $F_{pro}$•**gabiddwamu**

/ "divided by" ≡ $F_{pro}$•**gabiddwamu**

± "add or subtract" / "plus or minus" / "positive or negative" ≡ **gatta oba toolako** / $F_a$•**yeeyi oba** $F_a$•**neddayi**

= "equals" or "is equal to" ≡ $F_{pro}$•**enkana**

≠ "does not equal" or "is not equal to" ≡ **te•**$F_{pro}$•**enkana**

≈ "is approximately equal to" ≡ **kumpi** $F_{pro}$•**enkana**

≡ "is equivalent to" or "has the same value as" ≡ $F_{pro}$•**wendonkana**

< "is less than" ≡ $F_a$•**tono okusinga**

≤ "is less than or equal to" ≡ $F_a$•**tono okusinga oba** $F_{pro}$•**enkana**

> "is greater than" ≡ $F_a$•**nene okusinga**

≥ "is greater than or equal to" ≡ $F_a$•**nene okusinga oba** $F_{pro}$•**enkana**

∝ "varies as" or "is proportional to" ≡ $F_{pro}$•**kyuka nga** oba $F_{pro}$•**gendana** ne

. "(decimal) point" ≡ **pointi**

, "(decimal) comma" ≡ **komma**

% "per cent" or "out of a hundred" ≡ $F_{pro}$•**nnakikumi**

‰ "per mil" or "out of a thousand" ≡ $F_{pro}$•**nnalukumi**

[×] "the largest whole number which is not greater than ×" ≡ **ennambilila ennenejja etasinga ×**

|×| "absolute value of ×" ≡ **omuwendo gwa × ggeleggele**

$×^2$ "× squared" or "× multiplied by itself" ≡ × **eksa** $F_a$•**biliguze**

$×^3$ "× cubed" ≡ × **eksa** $F_a$•**satuguze**

√× "the square root of ×" ≡ **embiligaze ya × (eksa)**

$\sqrt[3]{×}$ "the cube root of ×" ≡ **ensatugaze ya × (eksa)**

∠ "angle" ≡ **ensonda**

∥ "is parallel to" ≡ $F^+$•**lalalaana**

⊥ "is perpendicular to" ≡ $F^+$•**simbe** ku

° "degree" ≡ **digri**

′ "minute" ≡ **eddakiika**

″ "second" ≡ **akatikitiki**

×! "factorial ×" ≡ **× (eksa) nnankozi**

{ } "set" ≡ **ekibinja**

∈ ∉ "is (not) a member/ element of" ≡ **(si)** F**•nnakibinja** $F_{pro}$**•a**

⊂ "is a subset of" ≡ **kibinjawansa kya**

⊃ "includes" or "is a super-set of" ≡ $F_{pro}$**•zingilamu** oba **kibinjawagwa kya**

∪ "union of" ≡ **ekimuyo kya**

∩ "intersection of" ≡ **ekibinjawakata kya**

Ø "null" or "empty set" ≡ **ekibinja ekyeleele**

σ "standard deviation" ≡ **obukubokwafu nnalugelelo**

→ "implies" ≡ $F_{pro}$**•zingwa**

← "is implied by" ≡ $F_{pro}$**•zinga**

↔ "implies and is implied by" ≡ $F_{pro}$**•zingwa ela** $F_{pro}$**•zinga**

∴ "therefore" ≡ **noolwekyo**

∞ "infinity" ≡ **entakoma**

e ≈ 2.71828 **ennamba ya Euler /**oilă/

f(×) "a function of" ≡ **omukolo gwa × (eksa)**

π pi ≈ 3.14159 pi ≈ 3.14159

& "hexadecimal number follows" ≡ **ennamba enkumikaaga egobelela**

( ) "round brackets" ≡ **obukomela obukulungilivu**

[ ] "square brackets" ≡ **obukomela nnamraba**

{ } "curly brackets" ≡ **obukomela nnamasadde**

< > "angle brackets" ≡ **obukomela nnansonda**

## IV. EBIMIIMO BY'OMU ALGEBRA*

algebra ≡ algebra

binomial ≡ $F_a$•nnabitundubibilye

| | |
|---|---|
| bounds | ≡ amakomagano |
| changing the subject | ≡ okukyusa omulamwa |
| codomain | ≡ ettwalagane |
| coefficient | ≡ ekituukilizagano |
| conditional equation | ≡ ekyenkano kinnambeela |
| constant | ≡ ekitakyuka |
| constant term | ≡ ekimiimo ekitakyuka |
| convention for letters | ≡ enneekobaana ku nnukuta |
| degree of a term | ≡ digri y'ekimiimo |
| degree of an expression | ≡ digri y'ekinyigabwalo |
| dependent variable | ≡ ekikyuka ekitetengeledde |
| Diophantine equations | ≡ ebyenkano ebinnaDiofantus |
| domain | ≡ ettwale |
| elimination | ≡ okweggyako |
| equation | ≡ ekyenkano |
| expansion | ≡ okuwanvuya |
| explicit function | ≡ omukolo omuteleevu |
| expression | ≡ ekinyigabwalo |
| factors | ≡ emibazisaganyo |
| flow diagram | ≡ ekilyebulo kkulukusa |
| formula | ≡ enkukulilo |
| function | ≡ omukolo |
| function machine = [flow diagram] | ≡ ekilyebulo kkulukusa |
| identity | ≡ ekyenkanokano |
| implicit function | ≡ omukolo omulandazzi |
| independent equations | ≡ ebyenkano ebyetengeledde |
| independent variable | ≡ ekikyuka ekyetengeledde |
| indeterminate equations | ≡ ebyenkano ebitakomelezekeka |

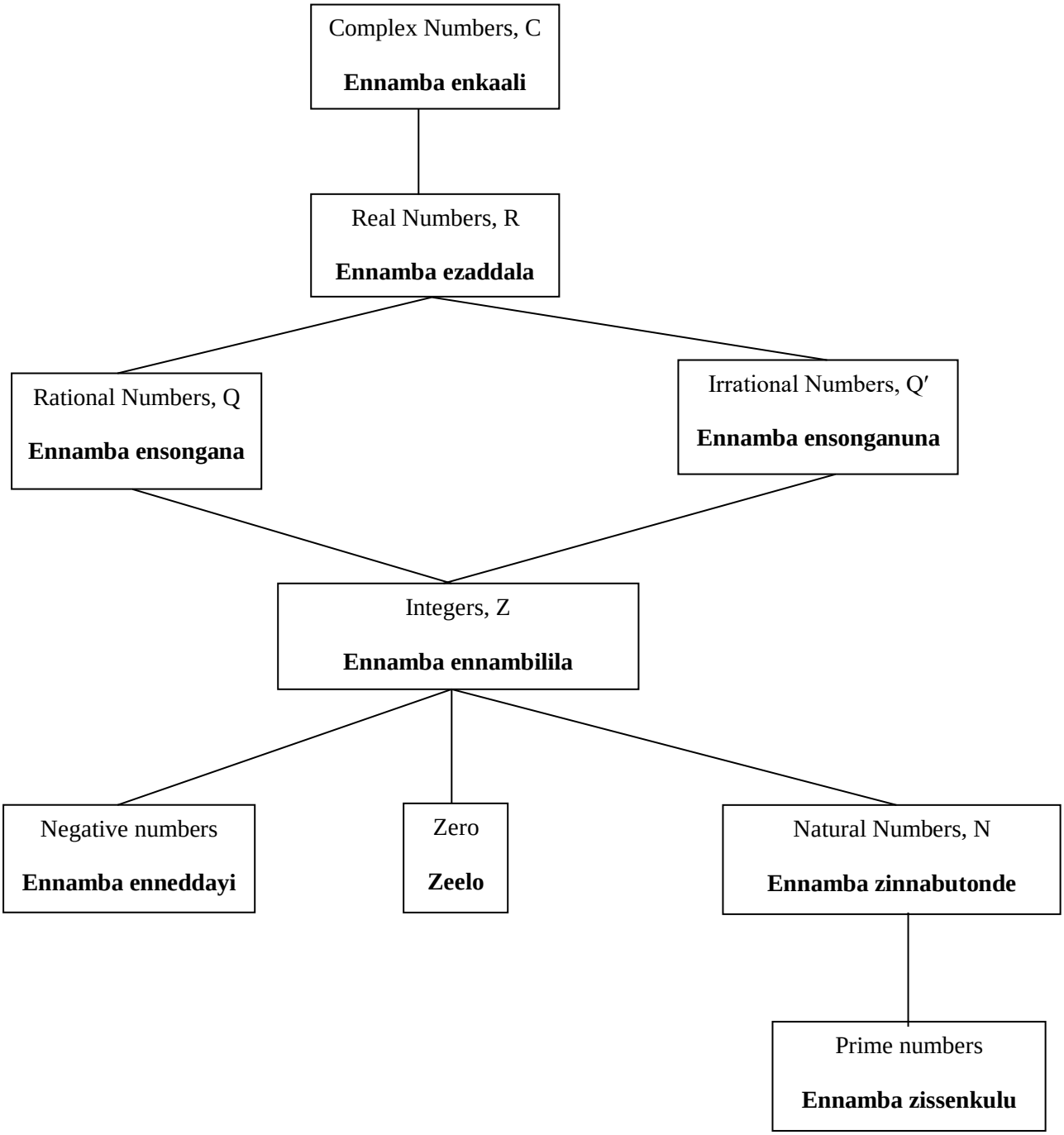
| | |
|---|---|
| inverse function | ≡ omukolo omugalike |
| irreducible | ≡ te•$F_{pro}$•zzika ku |
| like terms | ≡ ebimiimo ebyenkanankana |
| linear equation | ≡ ekyenkano ekinnalaini |
| literal expression | ≡ ekinyigabwalo kinnanukuta |
| many-to-many correspondence | ≡ okwanukulagana $F_{pro}$•ngi-ku-$F_{pro}$•ngi |
| mapping | ≡ okuteeba, enteeba |
| mapping diagram | ≡ ekilyebulo ky'ebiteebo |
| multinomial | ≡ $F_a$•nnabitundubingye |
| nested multiplication | ≡ embaza ensuye |
| one-to-many correspondence | ≡ okwanukulagana $F_{pro}$•mu-ku-$F_{pro}$•ngi |
| one-to-one correspondence | ≡ okwanukulagana $F_{pro}$•mu-ku-$F_{pro}$•mu |
| polynomial expression | ≡ ekinyigabwalo ekinnabitundubingye |
| quadratic equation | ≡ ekyenkano ekibiliguze |
| range | ≡ olutuukilo |
| real variable | ≡ ekikyuka ekyaddala |
| reducible | ≡ $F_{pro}$•zzika ku |
| root | ≡ omulandila |
| satisfy | ≡ okumatiza |
| simplify | ≡ okugonza |
| simultaneous equations | ≡ ebyenkano ebiseelankanyi |
| solution | ≡ ekimelengulo |
| substitution | ≡ okusikiza |
| term | ≡ ekimiimo |
| transpose | ≡ okuseetula |
| trial and improvement = [trial and error] | ≡ emmelengula eteebeleza |
| trinomial | ≡ $F_a$•nnabitundubisatwe |
| trivial solution | ≡ ekimelengulo eky'okubalaata |

unique solution ≡ ekimelengulonuta

variable ≡ ekikyuka

*Laba Tapson (1996: 6-11)

## V. EBIMIIMO BY'OMU ALGEBRA*




Ensibuko: Lipschutz, Seymour (1964) *Set Theory and Related Topics*