

# Glossary

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**Intermediate School Level**

## Mathematics Glossary

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**English / Swahili**

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Translation of Mathematics Terms  
Based on the Coursework for  
Mathematics Grades 6 to 8.

Word-for-word glossaries are used for  
testing accommodations for ELL/LEP  
students.

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## Mathematics Glossary – Intermediate School Level

English	Swahili
absolute value	thamani kamili
accurately label work	tambulisha kazi kwa usahihi
adapt	tohoa
additive inverse	kinyume jumlishi
adjacent	-a kupakana
adjacent side of a triangle	pande wa kupakana wa pembe tatu
algebra	algebra
algebraic equation	mlinganyo wa algebra
algebraic expression	mlingayo wa algebra
algebraic inequalities	tofuti za kialgebra
algebraic pattern	ruwaza ya kialgebra
algebraic solution	jawabu la kialgebra
algebraically	kialgebra
alternate exterior angle	pembe mbadala ya nje
alternate interior angles	pembe mbadala ya ndani
altitude	mwinuko
analyze	changanua
angle bisector	kigawakati cha pembe
angle pairs	jozi za pembe
apply	tumia
apply a variety of strategies	tumia mikakati mbalimbali
appropriate mathematical terms	istilahi muafaka za kihisabati
approximation	ukadiriaji
arc	tao
area	eneo
area of a circle	eneo la mzunguko
argument	hoja
arithmetically	arithmetiki
associative property of addition	tabia shiriki ya kujumlisha
associative property of multiplication	tabia shiriki ya kuzidisha
base (of percent)	kizio (cha asilimia)
base of a 2-dimensional shape	kizio cha umbo la pande 2
base of a 3-dimensional shape	kizio cha umbo la pande 3
base ten number system	mfumo wa namba wa kizio cha kumi
binomial	vipeo
bisector	msitari wa katikati
calculate	kokotoa
calculate distance	kokotoa umbali
calculate unit price	kokotoa kizio cha bei
calculate volume	kokotoa ujazo
Celsius	Celcius
central angle	pembe ya kati
chord	uzi
circle	duara
circle graph	grafu ya duara

## Mathematics Glossary – Intermediate School Level

English	Swahili
circumference	mzingo
clarifying questions	kufafanua maswali
coefficient	kizidishi
coherent	linganifu
collaboration	ushirikiano
combine like terms	weka pamoja mafungu yanayofanana
commission	wakilisha
commutative property of addition	tabia ya mabadiliko ya kujumlisha
commutative property of multiplication	tabia ya mabadiliko ya kuzidisha
compare strategies	linganisha mikakati
compare unit price	linganisha kizo cha bei
Compass	Dira
complementary angles	pembe zinazotegemeana
compound events	matukio ambatani
comprehend	elewa
conclusion	hitimisho
conduct	endesha
congruent	-a kulingana
conjecture (noun)	kisio
conjecture (verb)	kisia
connections	mahusiano
consecutive integers	namba kaamili zinazofuatana
consolidate	unganisha
constraints	kizuizi
construction	ujenzi
convert money	badilisha pesa
convert capacity within a given	badilisha ukubwa ndani ya mfumo uliopewa
convert mass within a given system	badilisha tungamo ndani ya mfumo uliopewa
convert volume within a given system	badilisha ujazo ndani ya mfumo uliopewa
convert within a given system	badilisha ndani ya mfumo uliopewa
coordinate geometry	jiometri ambatani
corresponding angles	pembe linganifu
corresponding sides	pande linganifu
counterexample	mfano pingamizi
counting (natural) numbers	kuhesabu namba (asili)
counting numbers	kuhesabu namba
cup	kikombe
customary units of capacity	vizio vya kawaida vya ujazo
customary units of mass	vizio vya kawaida vya tungamo
data	data
decode	simbua
defend	tetea
degree of a polynomial	kiwango milinganyo mingi ya kialgebra
density	msongamano
dependent events	matukio tegemezi

## Mathematics Glossary – Intermediate School Level

English	Swahili
describe	elezea
develop formulas	tengeneza fombyula
diameter	kipenyo
differentiate	tofautisha
dilate	panua
dilation	upanuzi
dimensions	vipimo
discuss	jadili
distance	umbali
distinguish	pambanua
distributive property	tabia gavi
domain	kikoa
double bar graph	grafu ya pau mbili
double line graphs	grafu ya mistari miwili
draw a graph	chora grafu
draw a picture	chora picha
draw conclusions	weka hitimisho
equation	mlinganyo
equation of a line	mlinganyo wa mstari
equidistant	umbali sawa
equivalent customary units of	vizio sawa vya kidehuri vya
equivalent fractions	sehemu sawa
equivalent numerical expressions	milinganyo sawa ya namba
equivalent ratios	uwiano sawa
estimate	kadiria
evaluate	tathmini
evaluate conjectures	tathmini makisio
evaluate efficiency	tathmini ufanisi
exchange rate table	jewali ya kiwango cha ubadilishaji
expenses	gharama
explain	elezea
explore	chunguza
exponent	kipeo
exponential form	muundo wa kipeo
extend	tanua
exterior angle	pembe ya nje
extremes (of a proportion)	kupita mipaka (ya urari)
faces and bases	nyuso na vizio
of cones	vya koni
of cylinders	vya silinda
of prisms	vya mche
of pyramids	vya piramidi
factor	gawo
Fahrenheit	Farenheiti
favorable outcome	matokeo mazuri

## Mathematics Glossary – Intermediate School Level

English	Swahili
fixed distance	umbali funge
formally	rasmi
formula	fomyula
formulate	unda
formulate mathematically	unda kihisabati
fraction	sehemu
frequency	idadi
frequency table	jedwali ya idadi
function	namba tegemezi
function notation	nukuu ya namba tegemezi
function rule	kanuni ya namba tegemezi
fundamental counting principle	kanuni ya msingi ya kuhesabu
gallon	galoni
generalizations	ujumlishaji
geometric shape	umbo la kijometri
geometry	jometri
Graphically	kigrafu
gratuity	kiinua mgongo
greatest common factor	kigawe kikubwa cha shirika (KKS)
height	kimo
histogram	chati safuwima
hypotenuse	kiegana
ideas	mawazo
identity	utambulisho
identity element	elementi ya utaambulisho
identity property of addition	tabia ya utambulisho ya kujumlisha
identity property of multiplication	tabia ya utambulisho ya kuzidisha
image	twasira
impossible outcomes	matokeo yasiowezekana
income	mapato
Indirect	isiyo moja kwa moja
inductive reasoning	mantiki elekevu
inequality	kutokuwa sawa
informally	isiyo rasmi
input values	thamani ya taarifa
integer	namba kamili
integer coefficients	kizidishi cha namba kamili
integral	-a nambari kamili
integral exponents	kipeo cha namba kamili
interconnect	unganisha
interest	riba
interest rates	viwango vya riba
interior angles	pembe za ndani
interpret	tafsiri
interpret graphs	tafsiri grafu

## Mathematics Glossary – Intermediate School Level

English	Swahili
invalid approach	mbinu batili
inverse element	elementi ya kinyume
inverse operation	mahesabu ya kinyume
investigate	dadisi
investigate conjectures	dadisi makisio
irrational numbers	nambari witiri
irregular polygon	poligoni isiyolingana
irrelevant information	habari zisizo na uhusiano
justify	thibitisha
language of logic (and, or, not)	lugha ya mantiki (na, au, la)
law of exponents for division	sheria ya vipeo katika kugawanya
law of exponents for multiplication	sheria ya vipeo katika kuzidisha
law of exponents	sheria ya vipeo
legs of a right triangle	miguu ya pembetatu mraba
length	urefu
levels of precision	viwango vya usahihi
like (common) denominators	namba asili (za kawaida) zinazofanana
like terms	sehemu zinazofanana
line	mstari
line graph	grafu ya mstari
line symmetry	mstari linganifu
linear equation	mlinganyo ulionyooka
linear inequalities	milinganyo isiyosawa iliyonyooka
linear relationship	uhusiano ulionyooka
liter	lita
logic	mantiki
logical argument	hoja ya mantiki
logical reasoning	hoja mantiki
lowest terms	sehemu za chini kabisa
magnitude	kiwango
make conjectures	fanya makisio
manipulative (s)	viendeshi
map scale	kipimo cha ramani
mathematical argument	hoja za kihisabati
mathematical ideas	mawazo ya kihisabati
mathematical language	lugha ya kihisabati
mathematical phenomena	tukio la kihisabati
mathematical relationships	mahusiano ya kihisabati
mathematical statement	kauli za ya khisabati
mean	wastani
mean (of a proportion)	wastani (wa urari)
measure capacity	kipimo cha ukubwa
measures of central tendency	vipio vya tabia za kati
median	kati
methods of proof	mbinu za uhakiki

## Mathematics Glossary – Intermediate School Level

English	Swahili
metric system	mfumo wa vipimo
metric units of capacity	vizio vya vipimo vya ukubwa
metric units of mass	vizio vya vipimo vya tungamo
milliliter	mililita
misleading	inayopotosha
mixed numbers	namba mchanganyiko
mode	modi
model (noun)	modeli
model problems	modeli ya matatizo
model situations	modeli ya hali
model using manipulatives	modeli kwa kutumia viendeshi
model (s)	modeli
models	modeli
monitor	chunguza
monomial	mliganyo wa kialgebra wa sehemu moja
multiple	kadhaa
multiple representations	uwakilishi kadha
multiplicative inverse (reciprocal)	kinyume zidishi (kinyume katika kuzidisha)
multiply (multiplication)	zidisha (kuzidisha)
natural numbers	namba asili
negative	hasi
nonadjacent side of a triangle	upande wa pembetatu usiopakana
nonlinear equation	mlinganyo usionyooka
nonlinear relationship	uhusiano usionyooka
non-perfect squares	miraba isiyo kamili
non-repeating decimal	desimali isiyo ya marudio
nonstandard representations	uwakilishaji usio wa kiwango
non-terminating decimal	desimali isiyo ya kutamatisha
not preserved	isiyo hifadhiwa
number line	mstari wa namba
number system	mfumo wa namba
numeric (arithmetic) expression	mlinganyo wa namba (wa hesabu)
numerical problem	tatizo la kinambari
numerically	kinambari
observe patterns	zingatia ruwaza
operation	mahesabu
operations with polynomials	mahesabu na milinganyo mingi
order (verb)	panga (kitenzi)
order of operations	mpangilio wa mahesabu
ordered pair	jozi iliyopangiliwa
organize work	pangilia kazi
organized chart	chati iliyopangiliwa
organized list	orodha iliyopangiliwa
parallel lines	mistari sambamba
Percent	Asilimia



## Mathematics Glossary – Intermediate School Level

English	Swahili
percent decrease	upungufu wa asilimia
percent increase	ongezeko la asilimia
percent of quantity	asilimia ya kiwango
perfect square	mraba kamili
perimeter	mzingo
perpendicular bisector	mstari wa kati wa pembe mraba
personal references for capacity	marejeo ya binafsi kwa ajili ya ukubwa
personal references for units of	marejeo ya binafsi kwa ajili ya vizio vya
physical phenomena	matukio ya asili
Pi( $\pi$ )	Pi ( $\pi$ )
pint	painti
plot	chora
point	pointi
polygon	poligoni
polynomial	-a milinganyo mingi
population	idadi
positive	chanya
possible outcomes	matokeo yawezekanayo
power	nguvu
predict	bashiri
pre-image	twasira ya kabla
preserved	iliyohifadhiwa
prime factorization	vigawe tasa
probability	uwezekano
procedures	taratibu
process of elimination	mchakato wa kutengua
profit	faida
properties of real numbers	tabia za namba halisi
proportion	urari
proportional reasoning	mantiki wiani
proportionality	urari
protractor	kipimapembe
Pythagorean theorem	kanuni za kipaithegorasi
quadrant	roboduara
quadratic equation	mlinganyo wa mraba
quadratics	za kimraba
quadrilateral	pembenne
quart	kwati
radius	nusukipenyo
range	safu
rate	kiwango
rate	kiwango
rate of change	kiwango cha badiliko
rate of interest	kiwango cha riba
ratio	uwiano

## Mathematics Glossary – Intermediate School Level

English	Swahili
rational numbers	namba za uwiano
rationale	usawazisho
real numbers	nambari halisi
reasonableness of a solution	umantiki wa jawabu
recognize connections	tambua uhusiano
record data	rekodi data
rectangle	mstatili
rectangular prism	mche mstatili
reflect	akisi
reflection	kuaksi
refute	kataa
regular polygon	poligoni ya kawaida
relation	uhusiano
relative error	kosa la kawaida
relevant information	habari muhimu
repeating decimal	desimali inayojirudia
results	matokeo
rhombus	msambaba sawa
right angle	pembe mraba
rotate	zunguka
rotation	mzunguko
rotational symmetry	mzunguko linganifu
round (verb)	zunguka (kitenzi)
rule	kanuni
Sale price	bei ya Mauzo
Sales	Mauzo
sampling	kufanya sampuli
scientific notation	nukuu ya kisayansi
sector	sekta
segment bisector	mstari wa katikati
similar triangles	pembetatu pacha
simple interest	riba rahisi
simplify	rahisisha
simplify expressions	rahisisha milinganyo
slope	mwinamo
slope-intercept form	muundo wa mwinamo kukutana
social contexts	mazingira ya kijamii
social phenomena	matukio ya kijamii
solution	jawabu
solution set	seti ya jawabu
solution set of an equation	seti ya jawabu ya mlinganyo
solution set of an inequality	seti ya jawabu ya mlinganyo usiosawa
solutions	jawabu
solve	tatua
solve a simpler problem	tatua fumbo rahisi

## Mathematics Glossary – Intermediate School Level

English	Swahili
spatial reasoning	mantiki ya sehemu
special case (s)	kesi maalum
square	mraba
square root	kipeuo
standard form of a number	muundo rasmi wa namba
standard representations	uwakilishi rasmi
statistics	takwimu
straight edge	pembe nyoofu
strategies	mikakati
strategy selection	uchaguzi wa mikakati
subset	seti ndogo
substitute	mbadala
supplementary angles	pembe ya nyongeza
supportive argument	hoja saidizi
surface area of prisms	eneo la uso la mche
surface area of cylinders	eneo la uso la silinda
symbols in verbal form	alama katika muundo wa matamshi
symbols in written form	alama katika muundo wa maandishi
symmetry	ulinganifu
system of equations	mfumo wa milinganyo
system of inequalities	mfumo wa milinganyo isiyo sawa
table of values	jedwali ya thamani
tax	kodi
technical writing	maandishi ya kiufundi
term	mafungu
terminating decimal	desimali ya kutamatisha
transformation	mabadiliko
transformational geometry	jometri ya mabadiliko
translate	tafsiri
translation	tafsiri
transversal	inayokata mstari
Trapezoid	msambamba Tenge
Trial and error	Majaribio na makosa
triangle	pembe tatu
trinomial	mlinganyo wa sehemu tatu
unlike denominators	vigawe vinavyotofautiana
valid approach	mbinu halali
validity of sample methods	uhalali wa sampuli za mbinu
variable	kigeuzi
Venn diagram	mchoro wa Veni
verbal expression	mlinganyo wa maneno
verbal form	muundo wa maneno
verbal sentence	sentensi ya maneno
verbal symbols	alama za maneno
verbally	kwa maneno

## Mathematics Glossary – Intermediate School Level

<b>English</b>	<b>Swahili</b>
verify claims of others	thibitisha madai ya wengine
verify results	thibitisha matokeo
vertex	kipeo
vertical	wima
vertical angles	pembe wima
vertical line test	jaribio la mstari wima
vertical lines	mistari wima
visualization	muonekano
volume	ujazo
volume of a cylinder	ujazo wa silinda
volume of a prism	ujazo wa mche
whole number	namba nzima
width	upana
work backwards	fanya kazi nyuma
write an equation	andika mlinganyo
Y-intercept	makutano ya mstari Y
zero property of multiplication	tabia sufuri ya kuzidisha