

Himmelsbach, Zachary, et al. "[A Quantitative Study of Mathematical Vocabulary Use in Upper Elementary Classrooms.](#)" *Educational Researcher* (2025)

Supplemental Materials for A Quantitative Study of Mathematical Vocabulary Use in Upper Elementary Classrooms

Table A1: Mathematical Vocabulary Terms (in Alphabetical Order)

absolute value	composite	equivalence	interquartile range	number sentence
acute	continuous	equivalent	intersect	numerator
add	conversion factor	equivalent expression	interval	numerical
addend	convert	equivalent fraction	iqr	obtuse
addition	coordinate	estimate	isosceles	octagon
algorithm	cube	even number	kilogram	odd number
analog	cubed	expanded form	kilometer	opposite vertex
angle	cubic units	exponent	kite	ordered pair
angle measure	customary system of measurement	expression	lcm	ounce
approximate	customary unit	factors	least common multiple	parallel
arc	data	fraction	length	parallelogram
area	decimal	fraction form	line	parentheses
area model	decimal divisor	fractional unit	line plot	partial product
array	decimal expanded form	frequency	line segment	partition
associative	decimal fraction	gallon	liter	pentagon
attribute	decompose	gcd	long division	percent
average	degree	geometry	make ten	perimeter
axis	denominator	gram	mass	perpendicular
bar graph	dependent variable	graph	mean absolute deviation	picture graph
base ten	diagonal	greatest common factor	measure	pint
benchmark fraction	digit	half circle	measure of center	place value
bisect	dimension	half-circle	median	polygon
bisector	distance	hashmark	meter	polyhedron
box plot	distribution	height of	meters per second	positive number
capacity	distributive	heptagon	metric	pound
categorical data	divide	hexagon	metric unit	prime number
centimeter	divisible	hierarchy	milliliter	prism
circle	division	histogram	millimeter	product
coefficient	divisor	horizontal	mixed number	protractor
collinear	dot plot	hundred	mixed unit	pyramid
common denominator	double number line diagram	hundredth	multiply	quadrant

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common factor	endpoint	identity property	multiple	quadrilateral
common multiple	equal group	independent variable	multiplier	quart
commutative	equation	inequality	number path	quarter circle
ratio	tenth			
rational number	tessellate			
reciprocal	tetromino			
rectangle	thermometer			
regular polygon	thousand			
remainder	thousandth			
repeated addition	total			
rhombus	trapezoid			
right angle	triangle			
rotate	unit			
ruler	unit cube			
scale	unit form			
scaled graph	unit fraction			
scalene	unit interval			
semi-circle	unit price			
semicircle	unit rate			
simplify	unit square			
solid figure	unknown			
solution	value			
square	variability			
square unit	variable			
square units	vertex			
squared	vertical			
standard form	volume			
statistic	whole			
straight angle	whole number			
subtract	whole unit			
sum	word form			
supplementary angle	yard			
surface area				
survey				
symmetry				

Table A2: Most commonly used mathematical vocabulary words (Top 50)

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Word	Frequency
add(ition)	16103
multipl(y)	14466
fraction	13623
whole	12392
divide	11797
line	11499
hundred	11121
hundredth	10906
angle	10415
decimal	8515
tenth	8243
measur(e)	7490
rectang(le)	6327
square	6453
denominator	5564
subtract	5114
meter	4951
area	4179
triangle	3679
thousand	3614
circle	3577
division	3203
percent	3182
multiple	3086
equivalent	3022
graph	2965
numerator	2938
unit	2852
cube	2724
whole number	2697
total	2663
value	2420
degree	2269
length	2222
centimeter	1579
volume	1478
thousandth	1436
remainder	1374

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cup	1246
quart	1134
dimension	1120
simplif(y)	1105
digit	1088
number line	1044
equation	1010
data	927
polygon	882
acute	854

Caption: Parentheses show an example word that the stem includes. For example, “simplif(y)” counts instances of “simplify” and “simplified”. This is only indicated where stems do not form any matching word. For instance, “polygon” still counts instances of “polygons.”