

Math Vocabulary Grades K-6

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Kindergarten Math Vocabulary	
Modules	
1	<ul style="list-style-type: none">Exactly the same, not exactly the same, and the same, but... (ways to analyze objects to match or sort)Match (group items that are the same or that have the same given attribute)Sort (group objects according to a particular attribute)How many? (with reference to counting quantities or sets)Hidden partners (embedded numbers)Counting path (with reference to order of count)Number story (stories with add to or take from situations)Zero (understand the meaning of, write, and recognize)Number sentence ($3 = 2 + 1$)5-groupRows and columns (linear configuration types)Number path1 more (e.g., 4. 1 more is 5.) 1 less (e.g., 4. 1 less is 3.)Greater than, less than
2	<ul style="list-style-type: none">Above, below, beside, in front of, next to, behind (position words) <i>f</i>Solid (three-dimensional shape), Circle, Cone (solid shape), Cube (solid shape), Cylinder (solid shape), Sphere (solid shape), <i>f</i>Face (flat side of a solid), Flat (two-dimensional shape) <i>f</i>Hexagon (flat figure enclosed by six straight sides)Rectangle (flat figure enclosed by four straight sides), Square (flat figure enclosed by four straight, equal sides)CornersSides
3	<ul style="list-style-type: none">Balance scale (tool for weight measurement)Capacity (with reference to volume)Compare (specifically using direct comparison)Endpoint (with reference to alignment for direct comparison)Enough/not enough (comparative term)

	<ul style="list-style-type: none"> • Heavier than/lighter than (weight comparison) • Height (vertical distance measurement from bottom to top) • Length (distance measurement from end to end; in a rectangular shape, length can be used to describe any of the four sides) • Longer than/shorter than (length comparison) • More than/fewer than (discrete quantity comparison) • More than/less than (volume, area, and number comparisons) • Taller than/shorter than (height comparison) • The same as (comparative term) • Weight (heaviness measurement)
4	<ul style="list-style-type: none"> • Addition (specifically using add to with result unknown, put together with total unknown, put together with both addends unknown) • Addition and subtraction sentences (equations) • Make 10 (combine two numbers from 1 to 9 that add up to 10) • Minus (–) • Number bond (mathematical model) • Number pairs or partners (embedded numbers) • Part (addend or embedded number) • Put together (add) • Subtraction (specifically using take from with result unknown) • Take apart (decompose) • Take away (subtract) • Whole (total) • 5-group • Equals (=) • Hidden partners (embedded numbers) • Number sentence ($3 = 2 + 1$) • Number story (stories with add to or take from situations)
5	<ul style="list-style-type: none"> • 10 and ____ • 10 ones and some ones • 10 plus • Tens • Ones • Hide Zero cards (called Place Value cards in later grades, pictured to the right) • Regular counting by ones from 11 to 20 (eleven, twelve, thirteen, etc.) • Regular counting by tens to 100 (e.g., ten, twenty, thirty, forty, fifty, sixty, seventy, eighty, ninety, one hundred) • Say Ten counting by tens to 100 (e.g., 1 ten, 2 tens, 3 tens, 4 tens, 5 tens, 6 tens, 7 tens, 8 tens, 9 tens, 10 tens)

	<ul style="list-style-type: none"> • Teen numbers • 10-frame • 5-group
6	<ul style="list-style-type: none"> • First, second, third, fourth, fifth, sixth, seventh, eighth, ninth, tenth (ordinal numbers) • Above, below, beside, in front of, next to, behind (position words) • Circle • Cone (three-dimensional shape), Cube (three-dimensional shape), Cylinder (three-dimensional shape) • Face (two-dimensional side of a three-dimensional shape), Flat (two-dimensional shape) • Hexagon (flat figure enclosed by six straight sides) • Rectangle (flat figure enclosed by four straight sides) • Solid (three-dimensional shape) • Sphere (three-dimensional shape) • Square (flat figure enclosed by four straight, equal sides) • Triangle (flat figure enclosed by three straight sides) • Corners & Sides

1st Grade Math Vocabulary	
Modules	
1	<ul style="list-style-type: none"> • Count on (count up from one addend to the total) • Track (use different objects to track the count on from one addend to the total) • Expression (e.g., $2 + 1$ or $5 - 3$) • Addend (one of the numbers being added) • Doubles (e.g., $3 + 3$ or $4 + 4$) • Doubles plus 1 (e.g., $3 + 4$ or $4 + 5$) • Part (e.g., "What is the unknown part? $3 + \underline{\quad} = 8$") • Total and whole (use interchangeably instead of sum; e.g., "What is the total when we add 3 and 5?") • Label (using letters or words on a math drawing to indicate the referents from the story's context) • Addition, equal, and subtraction signs

	<ul style="list-style-type: none"> • Equation and number sentence (used interchangeably throughout the module) • Number bond (graphic showing part–part–whole) • Equal sign (=) • 5-groups (as pictured in the dot cards below), 2 rows of 5 • Sum • Unit • Mental Math • True • False • Unknown
2	<ul style="list-style-type: none"> • A ten (a group, or unit, consisting of 10 items) • Ones (individual units, 10 of which become a ten) • 5-groups • Add • Equals • Number bonds • Partners to ten • Subtract, Subtraction • Difference • Teen numbers • Combinations
3	<ul style="list-style-type: none"> • Centimeter (standard length unit within the metric system) • Centimeter cube (pictured to the right, also used as a length unit in this module) • Centimeter ruler (measurement tool using length units of centimeters) • Data (collected information) • Inch • Endpoint (the end of an object, referenced when aligning for measurement purposes) • Height (measurement of vertical distance of an object) • Length unit (measuring the length of an object with equal-sized units) • Poll (survey) • Table or graph (organized charts visually representing data) • 4Less than • Longer than/taller than • More than • Shorter than • Tally marks

4	<ul style="list-style-type: none"> • (greater than) • < (less than) • Place value (quantity represented by a digit in a particular place within a number) • = (equal) • Numerals • Ones • Tens • Digits • Two-digit number
5	<ul style="list-style-type: none"> • Attributes (characteristics of an object such as color or number of sides) • Composite shapes (shapes composed of two or more shapes) • Digital clock • Face (two-dimensional surface of a three-dimensional solid) • Fourth of (shapes), fourths (1 out of 4 equal parts) • Half-hour (interval of time lasting 30 minutes) • Half of, halves (1 out of 2 equal parts) • Half past (expression for 30 minutes past a given hour) • Hour (unit for measuring time, equivalent to 60 minutes or 1/24 of a day) • Hour hand (component on clock tracking hours) • Minute (unit for measuring time, equivalent to 60 seconds or 1/60 of an hour) • Minute hand (component on clock tracking minutes) • O'clock (used to indicate time to a precise hour, with no additional minutes) • Quarter of (shapes) (1 out of 4 equal parts) • Three-dimensional shapes: <ul style="list-style-type: none"> • Cone • Rectangular prism • Right rectangular prism • Two-dimensional shapes: <ul style="list-style-type: none"> • Half-circle • Quarter-circle • Rhombus (flat figure enclosed by four straight sides of the same length wherein two pairs of opposite sides are parallel) • Trapezoid (a quadrilateral in which at least one pair of opposite sides is parallel) • Clock • Shape names (two-dimensional and three-dimensional) from Kindergarten: <ul style="list-style-type: none"> • Circle • Cube • Cylinder

	<ul style="list-style-type: none"> • Hexagon (flat figure enclosed by six straight sides) • Rectangle (flat figure enclosed by four straight sides and four right angles) • Sphere • Square (rectangle with four sides of the same length) • Triangle (flat figure enclosed by three straight sides)
6	<ul style="list-style-type: none"> • Dime • Nickel • Penny • Quarter • $<$, $>$, $=$ (less than, greater than, equal to)

2nd Grade Math Vocabulary	
Modules	
1	<p>New or Recently Introduced Terms</p> <ul style="list-style-type: none"> • Make a ten (compose a unit of ten, e.g., $49 + 3 = 40 + 10 + 2$) <p>Familiar Terms and Symbols</p> <ul style="list-style-type: none"> • Addend (one of the numbers being added) • A ten (a place value unit composed of 10 ones) • Count on (count up from one addend to the total) • Expression (e.g., $2 + 1$, $13 - 6$) • Like units (e.g., frogs and frogs, ones and ones, tens and tens) • Make ten and take from ten (e.g., $8 + 3 = 8 + 2 + 1$ and $15 - 7 = 10 - 7 + 5 = 3 + 5$) • Number sentence (e.g., $2 + 3 = 5$, $7 = 9 - 2$, $10 + 2 = 9 + 3$) • Number bond (see image to the right) • One (a place value unit, 10 of which may be composed to make a ten) • Part (e.g., "What is the unknown part? $3 + \underline{\quad} = 8$") • Partners to 10 (e.g., 10 and 0, 9 and 1, 8 and 2, 7 and 3, 6 and 4, 5 and 5) • Say Ten counting (see the chart to the right) • Ten plus facts (e.g., $10 + 3 = 13$, $10 + 5 = 15$, $10 + 8 = 18$) • Total (e.g., for $3 + 4 = 7$ or $7 - 4 = 3$, seven is the whole, or total)
2	<p>New or Recently Introduced Terms</p> <ul style="list-style-type: none"> • Benchmark (e.g., "round" numbers like multiples of 10) • Endpoint (point where something begins or ends) • Estimate (an approximation of a quantity or number) • Hash mark (marks on a ruler or other measurement tool) • Meter (standard unit of length in the metric system)

	<ul style="list-style-type: none"> • Meter stick or strip (tool used to measure length) • Number line Overlap (extend over, or cover partly) Ruler (tool used to measure length) <p>Familiar Terms and Symbols</p> <ul style="list-style-type: none"> • Centimeter (standard length unit within the metric system) • Combine (join or put together) • Compare (specifically using direct comparison) • Difference (to find the difference between two numbers, subtract the smaller number from the greater number) • Height (vertical distance measurement from bottom to top) • Length (distance measurement from end to end; in a rectangular shape, length can be used to describe any of the four sides) • Length unit (e.g., centimeters, inches)
3	<p>New or Recently Introduced Terms</p> <ul style="list-style-type: none"> • Base ten numerals (e.g., a thousand is 10 hundreds, a hundred is 10 tens, starting in Grade 3 a one is 10 tenths, etc.) • Expanded form (e.g., $500 + 70 + 6$) • Hundreds place (e.g., the 5 in 576 is in the hundreds place) • One thousand (1,000) • Place value or number disk • Standard form (e.g., 576) • Unit form (e.g., 5 hundreds 7 tens 6 ones) • Word form (e.g., five hundred seventy-six) <p>Familiar Terms and Symbols</p> <ul style="list-style-type: none"> • $=$, $<$, $>$ (equal, less than, greater than) • Altogether (e.g., 59 centimeters and 17 centimeters; altogether there are 76 centimeters) • Bundling, grouping (putting smaller units together to make a larger one, e.g., putting 10 ones together to make a ten or 10 tens together to make a hundred) • How many more/less (the difference between quantities) • How much more/less (the difference between quantities) • More than/less than (e.g., 576 is more than 76; 76 is less than 576) • Number sentence (an equation or inequality that has a true or false value and contains no unknowns, e.g., $3 + 2 = 5$) • Ones place (e.g., the 6 in 576 is in the ones place) • Place value (the unitary values of the digits in numbers) • Renaming, changing (instead of carrying or borrowing, e.g., a group of 10 ones is renamed a ten when the ones are bundled and moved from the ones to the tens place; if using \$1 bills, they may be changed for a \$10 bill when there are enough) • Tens place (e.g., the 7 in 576 is in the tens place) • Units of ones, tens, hundreds, one thousand (a single one and groups of 10s, 100s, and 1,000)

4	<p>New or Recently Introduced Terms</p> <ul style="list-style-type: none"> • Algorithm (a step-by-step procedure to solve a particular type of problem) • Compose (e.g., to make 1 larger unit from 10 smaller units) • Decompose (e.g., to break 1 larger unit into 10 smaller units) • Equation (two expressions with an equal sign between them; that is, an equation is a statement that two expressions are equal; however, there is no guarantee that the statement is true) • New groups below (show newly composed units on the line below the appropriate place in the addition algorithm) • Simplifying strategy (e.g., to solve $299 + 6$, think $299 + 1 + 5 = 300 + 5 = 305$) • Totals below <p>Familiar Terms and Symbols</p> <ul style="list-style-type: none"> • Addend • Addition • Bundle, unbundle, regroup, rename, change (compose or decompose a 10 or 100) • Difference • Hundreds place (referring to place value) • Place value (referring to the unit value of each digit in a given number) • Subtraction • Units of ones, tens, hundreds, thousands (referring to place value; 10 ones is the same as 1 unit of ten)
5	<p>New or Recently Introduced Terms</p> <ul style="list-style-type: none"> • Compensation (simplifying strategy where students add or subtract the same amount to or from both numbers to create an equivalent, but simpler, problem) <p>Familiar Terms and Symbols</p> <ul style="list-style-type: none"> • Addend • Addition • Algorithm • Bundle • Compose • Decompose • Difference • Equation • New groups below • Number bond • Place value • Place value chart • Place value or number disk

	<ul style="list-style-type: none"> • Rename • Simplifying strategy • Subtraction • Tape diagram • Total • Unbundle • Units of ones, tens, hundreds
6	<p>New or Recently Introduced Terms</p> <ul style="list-style-type: none"> • Array (an arrangement of objects in rows and columns) • Columns (the vertical groups in a rectangular array) • Even number (a whole number whose last digit is 0, 2, 4, 6, or 8) • Odd number (any number that is not even) • Repeated addition (e.g., $2 + 2 + 2$) • Rows (the horizontal groups in a rectangular array) • Tessellation (tiling of a plane using one or more geometric shapes with no overlaps and no gaps) • Whole number (e.g., 0, 1, 2, 3, ...) <p>Familiar Terms and Symbols</p> <ul style="list-style-type: none"> • Addends • Doubles • Equation • Number path • Number sentence • Pair • Rectangle • Skip-counting • Square • Sum • Tape diagram • Total • Unit
7	<p>New or Recently Introduced Terms</p> <ul style="list-style-type: none"> • Bar graph • Category (a group of people or things sharing a common characteristic; e.g., bananas are in the fruit category) • Data (a set of facts or pieces of information) • Degree (unit used to measure temperature, e.g., degrees Fahrenheit) • Foot (ft, a unit of length equal to 12 inches) • Inch (in, a unit of length)

	<ul style="list-style-type: none"> • Legend (the notation on a graph explaining what symbols represent) • Line plot (a graphical representation of data) • Picture graph (a representation of data like a bar graph, using pictures instead of bars) • Scale (a number line used to indicate the various quantities represented in a bar graph) • Survey (collecting data by asking a question and recording responses) • Symbol (a picture that represents something else) • Table (a representation of data using rows and columns) • Thermometer (a tool used to measure temperature) • Yard (yd, a unit of length equal to 36 inches or 3 feet) <p>Familiar Terms and Symbols</p> <ul style="list-style-type: none"> • Benchmark number (e.g., numbers like the multiples of 10) • Centimeter (cm, a unit of length measure) • Cents (e.g., 5¢) • Coins (e.g., penny, nickel, dime, and quarter) • Compare • Compose • Decompose • Difference • Dollars (e.g., \$2) • Endpoint • Equation • Meter strip • Meter stick • Number bond • Ruler • Height • Tape diagram • Unit • Value • Length unit • Length • Tally mark • Estimation (an approximation of the value of a quantity or number) • Number line (a line marked at evenly spaced intervals) • Overlap (to extend over or cover partly) • Meter (m, a unit of length measure) • Hash mark (the marks on a ruler or other measurement tool)
8	New or Recently Introduced Terms

- a.m./p.m.
- Analog clock
- Angle (e.g., figure formed by the corner of a polygon)
- Digital clock
- Parallel (two lines on the same plane that do not intersect)
- Parallelogram (quadrilateral with both pairs of opposite sides parallel)
- Polygon (closed figure with three or more straight sides, e.g., triangle, quadrilateral, pentagon, hexagon)
- Quarter past, quarter to
- Quadrilateral (four-sided polygon, e.g., square, rhombus, rectangle, parallelogram, trapezoid)
- Right angle (e.g., a square corner)
- Third of (shapes), thirds (three equal shares)
- Second (unit for measuring time)
- Whole
- 2 halves
- 3 thirds
- 4 fourths

Familiar Terms and Symbols

- Attributes (characteristics of an object such as number of sides, angles, or faces)
- Cube (three-dimensional shape composed of six squares)
- Face (a two-dimensional side of a three-dimensional shape)
- Fourth of (shapes), fourths (four equal shares)
- Half of (shapes), halves (two equal shares)
- Half past (expression for 30 minutes past a given hour)
- Half hour (interval of time lasting 30 minutes)
- Hour (unit for measuring time, equivalent to 60 minutes or $\frac{1}{24}$ of a day)
- Minute (unit for measuring time, equivalent to 60 seconds, $\frac{1}{60}$ of an hour)
- O'clock (used to indicate time to a precise hour with no additional minutes)
- Two-dimensional shapes (familiar prior to Grade 2):
 - Circle
 - Half-circle
 - Quarter-circle
 - Hexagon (2 dimensional figure enclosed by six straight sides and six angles)
 - Rectangle (2 dimensional figure enclosed by four straight sides and four right angles)
 - Rhombus (2 dimensional figure enclosed by four straight sides of the same length)
 - Square (rectangle with four sides of the same length)
 - Trapezoid (2 dimensional figure enclosed by four straight sides)

	<p>with only one pair of parallel sides)</p> <ul style="list-style-type: none"> ○ Triangle (2 dimensional figure enclosed by three straight sides) ● Quarter of (shapes), quarters (4 equal shares)
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3rd Grade Math Vocabulary	
Modules	
1	<ul style="list-style-type: none"> ● Array (arrangement of objects in rows and columns) ● Commutative property/commutative (e.g., rotate a rectangular array 90 degrees to demonstrate that factors in a multiplication sentence can switch places) ● Equal groups (with reference to multiplication and division; one factor is the number of objects in a group and the other is a multiplier that indicates the number of groups) ● Distribute (with reference to the distributive property, e.g., in $12 \times 3 = (10 \times 3) + (2 \times 3)$ the 3 is the multiplier for each part of the decomposition) ● Divide/division (partitioning a total into equal groups to show how many equal groups add up to a specific number, e.g., $15 \div 5 = 3$) ● Factors (numbers that are multiplied to obtain a product) ● Multiplication/multiply (an operation showing how many times a number is added to itself, e.g., $5 \times 3 = 15$) ● Number of groups (factor in a multiplication problem that refers to the total equal groups) ● Parentheses (symbols () used around an expression or numbers within an equation) ● Product (the answer when one number is multiplied by another) ● Quotient (the answer when one number is divided by another) ● Rotate (turn, used with reference to turning arrays 90 degrees) ● Row/column (in reference to rectangular arrays) ● Size of groups (factor in a multiplication problem that refers to how many in a group) ● Unit (one segment of a partitioned tape diagram) ● Unknown (the missing factor or quantity in multiplication or division)
2	<ul style="list-style-type: none"> ● About (with reference to rounding and estimation, an answer that is not precise) ● Addend (the numbers that are added together in an addition equation, e.g., in $4 + 5$, the numbers 4 and 5 are the addends) ● Capacity (the amount of liquid that a particular container can hold) ● Continuous (with reference to time as a continuous measurement) ● Endpoint (used with rounding on the number line; the numbers that mark the beginning and end of a given interval) ● Gram (g, unit of measure for weight)

	<ul style="list-style-type: none"> Interval (time passed or a segment on the number line) Halfway (with reference to a number line, the midpoint between two numbers, e.g., 5 is halfway between 0 and 10) Kilogram (kg, unit of measure for mass) Liquid volume (the space a liquid takes up) Liter (L, unit of measure for liquid volume) Milliliter (mL, unit of measure for liquid volume) Plot (locate and label a point on a number line) Point (a specific location on the number line) Reasonable (with reference to how plausible an answer is, e.g., “Is your answer reasonable?”) Round (estimate a number to the nearest 10 or 100 using place value) Second (a unit of time) Standard algorithm (for addition and subtraction) \approx (symbol used to show that an answer is approximate)
3	<ul style="list-style-type: none"> Multiple (specifically with reference to naming multiples of 9 and 10, e.g., 20, 30, 40, etc.) Product (the quantity resulting from multiplying two or more numbers together)
4	<ul style="list-style-type: none"> Area (the amount of two-dimensional space in a bounded region) Area model (a model for multiplication that relates rectangular arrays to area) Square unit (a unit of area—specifically square centimeters, inches, feet, and meters) Tile (to cover a region without gaps or overlaps) Unit square (e.g., given a length unit, it is a 1 unit by 1 unit square) Whole number (an integer, i.e., a number without fractions)
5	<ul style="list-style-type: none"> Copies (refers to the number of unit fractions in 1 whole) Equivalent fractions (fractions that name the same size or the same point on the number line) Fraction form (e.g., $\frac{1}{3}$, $\frac{2}{3}$, $\frac{3}{3}$, $\frac{4}{3}$) Fractional unit (half, third, fourth, etc.) Non-unit fraction (fraction with numerator other than 1) Unit form (in reference to fractions, e.g., 1 half, 2 thirds, 4 fifths) Unit fraction (fraction with numerator 1) Unit interval (the interval from 0 to 1, measured by length)
6	<ul style="list-style-type: none"> Frequent (most common measurement on a line plot) Key (notation on a graph explaining the value of a unit) Measurement data (e.g., length measurements of a collection of pencils) Scaled graphs (bar or picture graph in which the scale uses units with a

	value greater than 1)
7	<ul style="list-style-type: none"> • Diagonal (e.g., the line drawn between opposite corners of a quadrilateral) • Perimeter (the boundary or length of the boundary of a two-dimensional shape) • Regular polygon (a polygon whose side lengths and interior angles are all equal) • Tessellate (to tile a plane without gaps or overlaps) • Tetromino (a shape composed of four squares that are connected so that every square shares at least one side with another square)

4th Grade Math Vocabulary	
Modules	
1	<p>New or Recently Introduced Terms</p> <ul style="list-style-type: none"> • Millions, ten millions, hundred millions (as places on the place value chart) • Ten thousands, hundred thousands (as places on the place value chart) • Variables (letters that stand for numbers and can be added, subtracted, multiplied, and divided as numbers are) <p>Familiar Terms and Symbols</p> <ul style="list-style-type: none"> • =, <, > (equal to, less than, greater than) • Addend (e.g., in $4 + 5$, the numbers 4 and 5 are the addends) • Algorithm (a step-by-step procedure to solve a particular type of problem) • Bundling, making, renaming, changing, exchanging, regrouping, trading (e.g., exchanging 10 ones for 1 ten) • Compose (e.g., to make 1 larger unit from 10 smaller units) • Decompose (e.g., to break 1 larger unit into 10 smaller units) • Difference (answer to a subtraction problem) • Digit (any of the numbers 0 to 9; e.g., What is the value of the digit in the tens place?) • Endpoint (used with rounding on the number line; the numbers that mark the beginning and end of a given interval) • Equation (e.g., $2,389 + 80,601 = \underline{\hspace{2cm}}$) • Estimate (an approximation of a quantity or number) • Expanded form (e.g., $100 + 30 + 5 = 135$) • Expression (e.g., 2 thousands \times 10) • Halfway (with reference to a number line, the midpoint between two numbers; e.g., 5 is halfway between 0 and 10) • Number line (a line marked with numbers at evenly spaced intervals) • Number sentence (e.g., $4 + 3 = 7$) • Place value (the numerical value that a digit has by virtue of its position in a number) • Rounding (approximating the value of a given number)

	<ul style="list-style-type: none"> • Standard form (a number written in the format 135) • Sum (answer to an addition problem) • Tape diagram (bar diagram) • Unbundling, breaking, renaming, changing, regrouping, trading (e.g., exchanging 1 ten for 10 ones) • Word form (e.g., one hundred thirty-five)
2	<p>New or Recently Introduced Terms</p> <ul style="list-style-type: none"> • Convert (express a measurement in a different unit; rename units) <p>Please note the descriptions for the following terms, which are frequently misused:</p> <ul style="list-style-type: none"> • Expression: A number, or any combination of sums, differences, products, or divisions of numbers that evaluates to a number (e.g., $3 + 4$, 8×3, $15 \div 3$ as distinct from an equation or number sentence). • Equation: A statement that two expressions are equal (e.g., $3 \times \underline{\quad} = 12$, $5 \times b = 20$, $3 + 2 = 5$). • Number sentence (also addition, subtraction, multiplication, or division sentence): An equation or inequality for which both expressions are numerical and can be evaluated to a single number (e.g., $4 + 3 = 6 + 1$, $2 = 2$, $21 > 7 \times 2$, $5 \div 5 = 1$). Number sentences are either true or false (e.g., $4 + 4 < 6 \times 2$ and $21 \div 7 = 4$) and contain no unknowns. <ul style="list-style-type: none"> ◦ Kilometer (km, a unit of measure for length) ◦ Mass (the measure of the amount of matter in an object) ◦ Milliliter (mL, a unit of measure for liquid volume) ◦ Mixed units (e.g., 3 m 43 cm) <p>Familiar Terms and Symbols</p> <ul style="list-style-type: none"> • $=$, $<$, $>$ (equal to, less than, greater than) • Algorithm (a step-by-step procedure to solve a particular type of problem) • Capacity (the maximum amount that something can contain) • Distance (the length of the line segment joining two points) • Equivalent (equal) • Kilogram (kg), gram (g) (units of measure for mass) • Larger or smaller unit (used in a comparison of units) • Length (the measurement of something from end to end) • Liter (L) (unit of measure for liquid volume) • Measurement (dimensions, quantity, or capacity as determined by comparison with a standard) • Meter (m), centimeter (cm) (units of measure for length) • Mixed units (e.g., 2 tens 4 ones, 2 kilometers 34 meters) • Simplifying strategy (a mental math or recorded method for making a problem easier to solve) • Table (used to represent data) • Times as much as (e.g., 1 hundred is 10 times as much as 1 ten)

	<ul style="list-style-type: none"> Weight (the measurement of how heavy something is)
3	<p>New or Recently Introduced Terms</p> <ul style="list-style-type: none"> Associative property (e.g., $96 = 3 \times (4 \times 8) = (3 \times 4) \times 8$) Composite number (positive integer having three or more whole number factors) Distributive property (e.g., $64 \times 27 = (60 \times 20) + (60 \times 7) + (4 \times 20) + (4 \times 7)$) Divisible Divisor (the number by which another number is divided) Formula (a mathematical rule expressed as an equation with numbers and/or variables) Long division (process of dividing a large dividend using several recorded steps) Partial product (e.g., $24 \times 6 = (20 \times 6) + (4 \times 6) = 120 + 24$) Prime number (positive integer greater than 1 having whole number factors of only 1 and itself) Remainder (the number left over when one integer is divided by another) <p>Familiar Terms and Symbols</p> <ul style="list-style-type: none"> Algorithm (steps for base ten computations with the four operations) Area (the amount of two-dimensional space in a bounded region) Area model (a model for multiplication and division problems that relates rectangular arrays to area, in which the length and width of a rectangle represent the factors for multiplication, and for division, the width represents the divisor and the length represents the quotient) Array (a set of numbers or objects that follow a specific pattern, a matrix) Bundling, grouping, renaming, changing (compose or decompose a 10, 100, etc.) Compare (to find the similarity or dissimilarity between) Distribute (decompose an unknown product in terms of two known products to solve) Divide, division (e.g., $15 \div 5 = 3$) Equation (a statement that the values of two mathematical expressions are equal using the = sign) Factors (numbers that can be multiplied together to get other numbers) Mixed units (e.g., 1 ft 3 in, 4 lb 13 oz) Multiple (product of a given number and any other whole number) Multiply, multiplication (e.g., $5 \times 3 = 15$) Perimeter (length of a continuous line forming the boundary of a closed geometric figure) Place value (the numerical value that a digit has by virtue of its position in a number) Product (the result of multiplication)

	<ul style="list-style-type: none"> • Quotient (the result of division) • Rectangular array (an arrangement of a set of objects into rows and columns) • Rows, columns (e.g., in reference to rectangular arrays) • ____ times as many ____ as ____ (multiplicative comparative sentence frame)
4	<p>New or Recently Introduced Terms</p> <ul style="list-style-type: none"> • Acute angle (angle with a measure of less than 90°) • Acute triangle (triangle with all interior angles measuring less than 90°) • Adjacent angle (Two angles $\angle AOC$ and $\angle COB$, with a common side OC, are adjacent angles if C is in the interior of $\angle AOB$.) • Angle (union of two different rays sharing a common vertex, e.g., $\angle ABC$) • Arc (connected portion of a circle) • Collinear (Three or more points are collinear if there is a line containing all of the points; otherwise, the points are non-collinear.) • Complementary angles (two angles with a sum of 90°) • Degree, degree measure of an angle (Subdivide the length around a circle into 360 arcs of equal length. A central angle for any of these arcs is called a one-degree angle and is said to have an angle measure of 1°.) • Diagonal (straight lines joining two opposite corners of a straight-sided shape) • Equilateral triangle (triangle with three equal sides) • Figure (set of points in the plane) • Interior of an angle (the convex region defined by the angle) • Intersecting lines (lines that contain at least one point in common) • Isosceles triangle (triangle with at least two equal sides) • Length of an arc (circular distance around the arc) • Line (straight path with no thickness that extends in both directions without end, e.g., AB) • Line of symmetry (line through a figure such that when the figure is folded along the line, two halves are created that match up exactly) • Line segment (two points, A and B, together with the set of points on AB between A and B, e.g., AB) • Obtuse angle (angle with a measure greater than 90°, but less than 180°) • Obtuse triangle (triangle with an interior obtuse angle) • Parallel (two lines in a plane that do not intersect, e.g., $AB \parallel CD$) • Perpendicular (Two lines are perpendicular if they intersect, and any of the angles formed between the lines is a 90° angle, e.g., $EF \perp GH$.) • Point (precise location in the plane) • Protractor (instrument used in measuring or sketching angles) • Ray (The OA is the point O and the set of all points on OA that are on the same side of O as the point A.) • Right angle (angle formed by perpendicular lines, measuring 90°)

	<ul style="list-style-type: none"> • Right triangle (triangle that contains one 90° angle) • Scalene triangle (triangle with no sides or angles equal) • Straight angle (angle that measures 180°) • Supplementary angles (two angles with a sum of 180°) • Triangle (A triangle consists of three non-collinear points and the three line segments between them. The three segments are called the sides of the triangle, and the three points are called the vertices.) • Vertex (a point, often used to refer to the point where two lines meet, such as in an angle or the corner of a triangle) • Vertical angles (When two lines intersect, any two non-adjacent angles formed by those lines are called vertical angles or vertically opposite angles.) <p>Familiar Terms and Symbols</p> <ul style="list-style-type: none"> • Decompose (process of separating something into smaller components) • Parallelogram (quadrilateral with two pairs of parallel sides) • Polygon (closed two-dimensional figure with straight sides) • Quadrilateral (polygon with four sides) • Rectangle (quadrilateral with four right angles) • Rhombus (quadrilateral with all sides of equal length) • Square (rectangle with all sides of equal length) • Sum (result of adding two or more numbers) • Trapezoid (quadrilateral with at least one pair of parallel sides)
5	<p>New or Recently Introduced Terms</p> <ul style="list-style-type: none"> • Benchmark (standard or reference point by which something is measured) • Common denominator (when two or more fractions have the same denominator) • Denominator (e.g., the 5 in $\frac{3}{5}$ names the fractional unit as fifths) • Fraction greater than 1 (a fraction with a numerator that is greater than the denominator) • Line plot (display of data on a number line, using an x or another mark to show frequency) • Mixed number (number made up of a whole number and a fraction) • Numerator (e.g., the 3 in $\frac{3}{5}$ indicates 3 fractional units are selected) <p>Familiar Terms and Symbols</p> <ul style="list-style-type: none"> • $=$, $<$, $>$ (equal to, less than, greater than) • Compose (change a smaller unit for an equivalent of a larger unit, e.g., 2 fourths = 1 half, 10 ones = 1 ten; combining 2 or more numbers, e.g., 1 fourth + 1 fourth = 2 fourths, $2 + 2 + 1 = 5$) • Decompose (change a larger unit for an equivalent of a smaller unit, e.g., 1 half = 2 fourths, 1 ten = 10 ones; partition a number into 2 or more parts, e.g., 2 fourths = 1 fourth + 1 fourth, $5 = 2 + 2 + 1$) • Equivalent fractions (fractions that name the same size or amount) • Fraction (e.g., $\frac{1}{3}$, $\frac{2}{3}$, $\frac{3}{3}$, $\frac{4}{3}$)

	<ul style="list-style-type: none"> Fractional unit (e.g., half, third, fourth) Multiple (product of a given number and any other whole number) Non-unit fraction (fractions with numerators other than 1) Unit fraction (fractions with numerator 1) Unit interval (e.g., the interval from 0 to 1, measured by length) Whole (e.g., 2 halves, 3 thirds, 4 fourths)
6	<p>New or Recently Introduced Terms</p> <ul style="list-style-type: none"> Decimal expanded form (e.g., $(2 \times 10) + (4 \times 1) + (5 \times 0.1) + (9 \times 0.01) = 24.59$) Decimal fraction (a fraction with a denominator of 10, 100, 1,000, etc.) Decimal number (a number written using place value units that are powers of 10) Decimal point (a period used to separate the whole number part from the fractional part of a decimal number) Fraction expanded form (e.g., $(2 \times 10) + (4 \times 1) + (5 \times 1/10) + (9 \times 1/100) = 24 \frac{59}{100}$) Hundredth (a place value unit such that 100 hundredths equals 1 one) Tenth (a place value unit such that 10 tenths equals 1 one) <p>Familiar Terms and Symbols</p> <ul style="list-style-type: none"> Expanded form (e.g., $100 + 30 + 5 = 135$) Fraction (a numerical quantity that is not a whole number, e.g., $\frac{1}{3}$)
7	<p>New or Recently Introduced Terms</p> <ul style="list-style-type: none"> Cup (c) (customary unit of measure for liquid volume) Customary system of measurement (measurement system commonly used in the United States that includes such units as yards, pounds, and gallons) Customary unit (e.g., foot, ounce, quart) Gallon (gal) (customary unit of measure for liquid volume) Metric system of measurement (base-ten system of measurement used internationally that includes such units as meters, kilograms, and liters) Metric unit (e.g., kilometer, gram, milliliter) Ounce (oz) (customary unit of measure for weight) Pint (pt) (customary unit of measure for liquid volume) Pound (lb) (customary unit of measure for weight) Quart (qt) (customary unit of measure for liquid volume) <p>Familiar Terms and Symbols</p> <ul style="list-style-type: none"> Capacity (the maximum amount that a container can hold) Convert (to express a measurement in a different unit) Distance (the length of the line segment joining two points) Equivalent (the same) Foot (ft) (customary unit of measure for length) Gram (g), kilogram (kg) (metric units of measure for mass, not distinguished)

	<p>from weight at this time)</p> <ul style="list-style-type: none"> • Hour (hr) (unit of measure for time) • Inch (customary unit of measure for length, 12 inches = 1 foot) • Interval (time passed or a segment on the number line) • Length (the measurement of something from end to end) • Liter (L), milliliter (mL) (metric units of measure for liquid volume) • Measurement (dimensions, quantity, or capacity as determined by comparison with a standard) • Meter (m), centimeter (cm), kilometer (km) (metric units of measure for length) • Minute (min) (unit of measure for time) • Mixed units (e.g., 3 m 43 cm) • Second (sec) (unit of measure for time) • Table (used to represent data) • Weight (the measurement of how heavy something is) • Yard (yd) (customary unit of measure for length)
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5th Grade Math Vocabulary	
Modules	
1	<ul style="list-style-type: none"> • Exponent (how many times a number is to be used in a multiplication sentence) • Millimeter (a metric unit of length equal to one-thousandth of a meter) • Thousandths (related to place value) • $>$, $<$, $=$ (greater than, less than, equal to) • Base ten units (place value units) • Bundling, making, renaming, changing, regrouping, trading • Centimeter (cm, a unit of measure equal to one hundredth of a meter) • Digit (any of the numbers 0 to 9; e.g., what is the value of the digit in the tens place?) • Expanded form (e.g., $135 = 1 \times 100 + 3 \times 10 + 5 \times 1$) • Hundredths (as related to place value) • Number line (a line marked with numbers at evenly spaced intervals) Number sentence (e.g., $4 + 3 = 7$) • Place value (the numerical value that a digit has by virtue of its position in a number) • Power of 10 • Standard form (a number written in the format: 135) • Tenths (as related to place value) • Unbundling, breaking, renaming, changing, regrouping, trading Unit form (e.g., $3.21 = 3 \text{ ones } 2 \text{ tenths } 1 \text{ hundredth}$)

	<ul style="list-style-type: none"> • Word form (e.g., one hundred thirty-five)
2	<ul style="list-style-type: none"> • Conversion factor (the factor in a multiplication sentence that renames one measurement unit as another equivalent unit, e.g., $14 \times (1 \text{ in}) = 14 \times (1 \frac{1}{2} \text{ ft})$; 1 in and $1 \frac{1}{2}$ ft are the conversion factors) • Decimal fraction (a proper fraction whose denominator is a power of 10) • Multiplier (a quantity by which a given number—a multiplicand—is to be multiplied) • Parentheses (the symbols used to relate order of operations) • Decimal (a fraction whose denominator is a power of ten and whose numerator is expressed by figures placed to the right of a decimal point) • Digit (a symbol used to make numbers: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9) • Divisor (the number by which another number is divided) • Equation (a statement that the values of two mathematical expressions are equal) Equivalence (a state of being equal or equivalent) • Equivalent measures (e.g., 12 inches = 1 foot; 16 ounces = 1 pound) • Estimate (approximation of the value of a quantity or number) • Exponent (the number of times a number is to be used as a factor in a multiplication expression) • Multiple (a number that can be divided by another number without a remainder like 15, 20, or any multiple of 5) • Pattern (a systematically consistent and recurring trait within a sequence) • Product (the result of multiplying numbers together) • Quotient (the answer of dividing one quantity by another) • Remainder (the number left over when one integer is divided by another) • Renaming (decomposing or composing a number or units within a number) • Rounding (approximating the value of a given number) • Unit form (place value counting, e.g., 34 stated as 3 tens 4 ones)
3	<ul style="list-style-type: none"> • Benchmark fraction (e.g., $\frac{1}{2}$ is a benchmark fraction when comparing $\frac{1}{3}$ and $\frac{3}{5}$) • Like denominators (e.g., $\frac{1}{8}$ and $\frac{5}{8}$) • Unlike denominators (e.g., $\frac{1}{8}$ and $\frac{1}{7}$) • Between (e.g., $\frac{1}{2}$ is between $\frac{1}{3}$ and $\frac{3}{5}$) • Denominator (denotes the fractional unit: fifths in $\frac{3}{5}$ fifths, which is abbreviated as the 5 in $\frac{3}{5}$) • Equivalent fraction (e.g., $\frac{3}{5} = \frac{6}{10}$) • Fraction (e.g., $\frac{3}{5}$ fifths or $\frac{3}{5}$) • Fraction greater than or equal to 1 (e.g., $\frac{7}{3}$, $\frac{3}{1}$, $\frac{2}{2}$, an abbreviation for $3 + \frac{1}{2}$) • Fraction written in the largest possible unit (e.g., $\frac{3}{6} = 1 \times \frac{3}{2} \times \frac{3}{3} = \frac{1}{2}$ or 1 three out of 2 threes = $\frac{1}{2}$) • Fractional unit (e.g., the fifth unit in $\frac{3}{5}$ denoted by the denominator 5 in $\frac{3}{5}$)

	<ul style="list-style-type: none"> • Hundredth ($\frac{1}{100}$ or 0.01) • Kilometer, meter, centimeter, liter, milliliter, kilogram, gram, mile, yard, foot, inch, gallon, quart, pint, cup, pound, ounce, hour, minute, second • More than halfway and less than halfway • Number sentence (e.g., Three plus seven equals ten. Usually written as $3 + 7 = 10$.) • Numerator (denotes the count of fractional units: 3 in 3 fifths or 3 in $\frac{3}{5}$) • One tenth of (e.g., $\frac{1}{10}$ of 250) • Tenth ($\frac{1}{10}$ or 0.1) • Whole unit (e.g., any unit that is partitioned into smaller, equally sized fractional units) • $<$, $>$, $=$
4	<ul style="list-style-type: none"> • Decimal divisor (the number that divides the whole and has units of tenths, hundredths, thousandths, etc.) • Simplify (using the largest fractional unit possible to express an equivalent fraction) • Familiar Terms and Symbols1 Commutative property (e.g., $4 \times 12 = 12 \times 4$) • Conversion factor • Decimal fraction • Denominator (denotes the fractional unit, e.g., fifths in 3 fifths, which is abbreviated to the 5 in $\frac{3}{5}$) • Distribute (with reference to the distributive property, e.g., in $125 \times 15 = (1 \times 15) + (25 \times 15)$) • Divide, division (partitioning a total into equal groups to show how many units in a whole, e.g., $5 \div 15 = 25$) • Equation (a statement that two expressions are equal, e.g., $3 \times 4 = 6 \times 2$) • Equivalent fraction • Expression • Factors (numbers that are multiplied to obtain a product) • Foot, mile, yard, inch, gallon, quart, pint, cup, pound, ounce, hour, minute, second • Fraction greater than or equal to 1 (e.g., $7\frac{2}{3}$, $3\frac{1}{2}$, an abbreviation for $3 + \frac{1}{2}$) • Fraction written in the largest possible unit (e.g., $36 = 1 \times 32 \times 3 = 12$ or 1 three out of 2 threes = $1\frac{2}{3}$) • Fractional unit (e.g., the fifth unit in 3 fifths denoted by the denominator 5 in $\frac{3}{5}$) • Hundredth ($\frac{1}{100}$ or 0.01) • Line plot • Mixed number ($3\frac{1}{2}$, an abbreviation for $3 + \frac{1}{2}$) • Numerator (denotes the count of fractional units, e.g., 3 in 3 fifths or 3 in $\frac{3}{5}$) • Parentheses (symbols () used around a fact or numbers within an equation or expression)

	<ul style="list-style-type: none"> • Quotient (the answer when one number is divided by another) • Tape diagram (method for modeling problems) • Tenth ($\frac{1}{10}$ or 0.1) • Unit (one segment of a partitioned tape diagram) • Unknown (the missing factor or quantity in multiplication or division) • Whole unit (any unit partitioned into smaller, equally sized fractional units)
5	<ul style="list-style-type: none"> • Base (one face of a three-dimensional solid—often thought of as the surface on which the solid rests) • Bisect (divide into two equal parts) • Cubic units (cubes of the same size used for measuring volume) • Height (adjacent layers of the base that form a rectangular prism) • Hierarchy (series of ordered groupings of shapes) • Unit cube (cube whose sides all measure 1 unit; cubes of the same size used for measuring volume) • Volume of a solid (measurement of space or capacity) • Angle (the union of two different rays sharing a common vertex) • Area (the number of square units that covers a two-dimensional shape) • Attribute (given quality or characteristic) • Cube (three-dimensional figure with six square sides) • Degree measure of an angle (subdivide the length around a circle into 360 arcs of equal length; a central angle for any of these arcs is called a one-degree angle and is said to have an angle measure of 1 degree) • Face (any flat surface of a three-dimensional figure) • Kite (quadrilateral with two pairs of two equal sides that are also adjacent; a kite can be a rhombus if all sides are equal) • Parallel lines (two lines in a plane that do not intersect) • Parallelogram (four-sided closed figure with opposite sides that are parallel and equal) • Perpendicular (two lines are perpendicular if they intersect, and any of the angles formed between the lines are 90° angles) • Perpendicular bisector (line that cuts a line segment into two equal parts at 90°) • Plane (flat surface that extends infinitely in all directions) • Polygon (closed figure made up of line segments) • Quadrilateral (closed figure with four sides) • Rectangle (parallelogram with four 90° angles) • Rectangular prism (three-dimensional figure with six rectangular sides) • Rhombus (parallelogram with four equal sides) • Right angle (angle formed by perpendicular lines; angle measuring 90°) • Right rectangular prism (rectangular prism with only 90° angles) • Solid figure (three-dimensional figure)

	<ul style="list-style-type: none"> • Square units (squares of the same size—used for measuring) • Three-dimensional figures (solid figures) • Trapezoid (quadrilateral with at least one pair of parallel sides) • Two-dimensional figures (figures on a plane)
6	<ul style="list-style-type: none"> • Axis (a fixed reference line for the measurement of coordinates) • Coordinate (a number that identifies a point on a plane) • Coordinate pair (two numbers that are used to identify a point on a plane; written (x, y) where x represents a distance from 0 on the x-axis and y represents a distance from 0 on the y-axis) • Coordinate plane (a plane spanned by the x-axis and y-axis in which the coordinates of a point are distances from the two perpendicular axes) • Ordered pair (two quantities written in a given fixed order, usually written as (x, y)) • Origin (a fixed point from which coordinates are measured; the point at which the x-axis and y-axis intersect, labeled $(0, 0)$ on the coordinate plane) • Quadrant (any of the four equal areas created by dividing a plane by an x-axis and a y-axis) • Angle (the union of two different rays sharing a common vertex) • Angle measure (the number of degrees in an angle) • Degree (a unit used to measure angles) • Horizontal (parallel to the x-axis) • Line (a two-dimensional object that has no endpoints and continues on forever in a plane) • Parallel lines (two lines in a plane that do not intersect) • Perpendicular lines (two lines are perpendicular if they intersect and any of the angles formed between the lines are 90-degree angles) • Point (a zero-dimensional figure that satisfies the location of an ordered pair) • Rule (a procedure or operation(s) that affects the value of an ordered pair) • Vertical (parallel to the y-axis)

6th Grade Math Vocabulary	
Modules	
1	<ul style="list-style-type: none"> • Equivalent Ratios (Two ratios $A : B$ and $C : D$ are equivalent ratios if there is a nonzero number c such that $C = cA$ and $D = cB$. For example, two ratios are equivalent if they both have values that are equal.) • Measurement of a Quantity (A measurement of a quantity is a representation of that quantity as a multiple of a unit of measurement. The multiple is a number called the measure of the quantity. Examples include 3 inches or 5 liters or 7 boys with measures 3, 5, and 7, respectively.) • Percent (One percent is the number $\frac{1}{100}$ and is written 1%. Percentages can be used as rates. For example, 30% of a quantity means $\frac{30}{100}$ times

	<p>the quantity.)</p> <ul style="list-style-type: none"> Quantity (illustration) (Examples of a quantity include a length, an area, a volume, a mass, a weight, a length of time, or a speed. It is an instance of a type of quantity.) All quantities of the same type have the properties that (1) two quantities can be compared, (2) two quantities can be combined to get a new quantity of that same type, and (3) there always exists a quantity that is a multiple of any given quantity. These properties help define ways to measure quantities using a standard quantity called a unit of measurement.) Rate (illustration) (A rate is a quantity that describes a ratio relationship between two types of quantities. For example, 1.25 miles hour is a rate that describes a ratio relationship between hours and miles: If an object is traveling at a constant 1.25 miles hour , then after 1 hour it has gone 1.25 miles, after 2 hours it has gone 2.50 miles, after 3 hours it has gone 3.75 miles, and so on. Rates differ from ratios in how they describe ratio relationships—rates are quantities and have the properties of quantities. For example, rates of the same type can be added together to get a new rate, as in 30 miles hour + 20 miles hour = 50 miles hour , whereas ratios cannot be added together.) Ratio (A ratio is an ordered pair of numbers which are not both zero. A ratio is denoted $A : B$ to indicate the order of the numbers—the number A is first and the number B is second.) Ratio Relationship (A ratio relationship is the set of all ratios that are equivalent ratios. A ratio such as 5: 4 can be used to describe the ratio relationship {1: 4 5 , 5 4 : 1, 5: 4, 10: 8, 15: 12, ... }. Ratio language such as “5 miles for every 4 hours” can also be used to describe a ratio relationship. Ratio relationships are often represented by ratio tables, double number lines diagrams, and by equations and their graphs.) Type of Quantity (illustration) (Examples of types of quantities include lengths, areas, volumes, masses, weights, time, and (later) speeds.) Unit of Measurement (A unit of measurement is a choice of a quantity for a given type of quantity. Examples include 1 cm, 1 m, or 1 in. for lengths, 1 liter or 1 cm³ for volumes, etc. But the choice could be arbitrary as well, such as the length between the vertical bars: ----- .) Unit Rate (When a rate is written as a measurement (i.e., a number times a unit), the unit rate is the measure (i.e., the numerical part of the measurement). For example, when the rate of speed of an object is written as the measurement 1.25 mph, the number 1.25 is the unit rate.) Value of a Ratio (The value of the ratio $A : B$ is the quotient $A \div B$ as long as B is not zero.) Convert Coordinate Plane Equation Tape Diagram
2	<ul style="list-style-type: none"> Greatest Common Factor (The greatest common factor of two whole numbers (not both zero) is the greatest whole number that is a factor of each number. For example, the GCF of 24 and 36 is 12 because when all of the whole number factors of 24 and 36 are listed, the largest factor they share is 12.) Least Common Multiple (The least common multiple of two whole numbers is

	<p>the smallest whole number greater than zero that is a multiple of each number. For example, the LCM of 4 and 6 is 12 because when the multiples of 4 and 6 are listed, the smallest or first multiple they share is 12.)</p> <ul style="list-style-type: none"> • Multiplicative Inverses (A multiplicative inverse of a number is a number such that the product of both numbers is 1. For example, $\frac{3}{4}$ and $\frac{4}{3}$ are multiplicative inverses of one another because $\frac{3}{4} \times \frac{4}{3} = \frac{4}{3} \times \frac{3}{4} = 1$. Multiplicative inverses do not always have to be the reciprocal. For example, $\frac{1}{5}$ and $\frac{10}{2}$ both have a product of 1, which makes them multiplicative inverses of each other.) • Algorithm • Composite Number • Distributive Property • Dividend • Divisor • Estimate • Factors • Multiples • Multiplicative Inverse • Prime Number • Reciprocal
3	<ul style="list-style-type: none"> • Absolute Value (The absolute value of a number is the distance between the number and zero on the number line. For example, $3 = 3$, $-4 = 4$, etc.) • Integer (An integer is a number that can either be represented as a whole number or as the opposite of a whole number. The set of integers is the infinite list of numbers: $\dots, -3, -2, -1, 0, 1, 2, 3, \dots$) • Magnitude (The magnitude of a measurement is the absolute value of the measure of the measurement. For example, the magnitude of the measurement -25°F is 25.) • Negative Number (A negative number is a number less than zero.) • Opposite (Given a nonzero number a on the number line, the opposite of a, denoted $-a$, is the number on the number line such that (1) 0 is between a and $-a$, and (2) the distance between 0 and a is equal to the distance between 0 and $-a$. The opposite of 0 is 0.) • Positive Number (A positive number is a number greater than zero.) • Quadrant (description) (In the Cartesian plane, the two axes separate the plane into four regions called quadrants. The first quadrant consists of all the points whose x- and y-coordinates are both positive. The first, second, third, and fourth quadrants are identified counterclockwise around the origin in order starting with the first quadrant.) • Rational Number (description) (A rational number is a number that can be represented as a fraction or the opposite of a fraction.) • Coordinate Pair • Coordinate Plane • Fraction • Line of Symmetry

	<ul style="list-style-type: none"> • Ordered Pair • Origin • Quadrant • Symmetry • Whole Numbers • x-Axis • x-Coordinate • y-Axis • y-Coordinate
4	<ul style="list-style-type: none"> • Equation (An equation is a statement of equality between two expressions.) • Equivalent Expressions (Two expressions are equivalent if both expressions evaluate to the same number for every substitution of numbers into all the variables in both expressions.) • Exponential Notation for Whole Number Exponents (Let m be a nonzero whole number. For any number a, the expression a^m is the product of m factors of a (i.e., $a^m = \underbrace{a \cdot a \cdot \dots \cdot a}_m$ times). The number a is called the base, and m is called the exponent or power of a.) • Expression (An expression is a numerical expression, or it is the result of replacing some (or all) of the numbers in a numerical expression with variables.) • Linear Expression (A linear expression is an expression that is equivalent to the sum/difference of one or more expressions where each expression is either a number, a variable, or a product of a number and a variable.) • Number Sentence (A number sentence is a statement of equality between two numerical expressions.) • Numerical Expression (A numerical expression is a number, or it is any combination of sums, differences, products, or divisions of numbers that evaluates to a number.) • Solution of an Equation (A solution to an equation with one variable is a number such that the number sentence resulting from substituting the number for all instances of the variable in both expressions is a true number sentence. If an equation has more than one variable, then a solution is an ordered tuple of numbers such that the number sentence resulting from substituting each number from the tuple into all instances of its corresponding variable is a true number sentence.) • Truth Values of a Number Sentence (A number sentence is said to be true if both numerical expressions evaluate to the same number; it is said to be false otherwise. True and false are called truth values.) • Value of a Numerical Expression (The value of a numerical expression is the number found by evaluating the expression.) • Variable (A variable is a symbol (such as a letter) that is a placeholder for a number.) • Distribute • Expand • Factor

	<ul style="list-style-type: none"> • Number Sentence • Product • Properties of Operations (distributive, commutative, associative) • Quotient • Sum • Term • True or False Number Sentence • Variable or Unknown Number
5	<ul style="list-style-type: none"> • Altitude and Base of a Triangle (An altitude of a triangle is a perpendicular segment from a vertex of a triangle to the line containing the opposite side. The opposite side is called the base. For every triangle, there are three choices for the altitude, and hence there are three base-altitude pairs. The height of a triangle is the length of the altitude. The length of the base is called either the base length or, more commonly, the base. Usually, context makes it clear whether the base refers to a number or a segment. These terms can mislead students: base suggests the bottom, while height usually refers to vertical distances. Do not reinforce these impressions by consistently displaying all triangles with horizontal bases.) • Cube (A cube is a right rectangular prism all of whose edges are of equal length.) • Hexagon (Given 6 different points A, B, C, D, E, F in the plane, a 6-sided polygon, or hexagon, is the union of 6 segments AB, BC, CD, DE, EF, FA such that (1) the segments intersect only at their endpoints, and (2) no two adjacent segments are collinear. For both pentagons and hexagons, the segments are called the sides, and their endpoints are called the vertices. Like quadrilaterals, pentagons and hexagons can be denoted by the order of vertices defining the segments. For example, the pentagon $ABCDE$ has vertices A, B, C, D, E that define the 5 segments in the definition above. Similar to quadrilaterals, pentagons and hexagons also have interiors, which can be described using pictures in elementary school.) • Line Perpendicular to a Plane (A line L in space that intersects a plane E at a point P is said to be perpendicular to the plane E if L is perpendicular to every line that (1) lies in E and (2) passes through the point P. A segment is said to be perpendicular to a plane if the line that contains the segment is perpendicular to the plane. In Grade 6, a line perpendicular to a plane can be described using a picture.) • Net (If the surface of a 3-dimensional solid can be cut along sufficiently many edges so that the faces can be placed in one plane to form a connected figure, then the resulting system of faces is called a net of the solid.) • Parallel Planes (Two planes in space are parallel if they do not intersect. In Euclidean geometry, a useful test for checking whether two planes are parallel is if the planes are different and if there is a line that is perpendicular to both planes.) • Pentagon (Given 5 different points A, B, C, D, E in the plane, a 5-sided polygon, or pentagon, is the union of 5 segments AB, BC, CD, DE, EA such that (1) the segments intersect only at their endpoints, and (2) no two adjacent segments are collinear.) • Right Rectangular Prism (Let E and E' be two parallel planes. Let B be a rectangular region⁴ in the plane E. At each point P of B, consider the

	<p>segment PP' perpendicular to E, joining P to a point P' of the plane E'. The union of all these segments is called a right rectangular prism. It can be shown that the region B' in E' corresponding to the region B is also a rectangular region whose sides are equal in length to the corresponding sides of B. The regions B and B' are called the base faces (or just bases) of the prism. It can also be shown that the planar region between two corresponding sides of the bases is also a rectangular region called the lateral face of the prism. In all, the boundary of a right rectangular prism has 6 faces: the 2 base faces and 4 lateral faces. All adjacent faces intersect along segments called edges—base edges and lateral edges.)</p> <ul style="list-style-type: none"> • Surface of a Prism (The surface of a prism is the union of all of its faces—the base faces and lateral faces.) • Triangular Region (A triangular region is the union of the triangle and its interior.) • Angle • Area • Length of a Segment • Parallel • Parallelogram • Perimeter • Perpendicular • Quadrilateral • Rectangle • Segment • Square • Trapezoid • Triangle • Volume
6	<ul style="list-style-type: none"> • Absolute Deviation (An <i>absolute deviation</i> is the distance of a data value from the mean of the data set.) • Box Plot (A <i>box plot</i> is a graphical representation of five numerical summary measures: the minimum, lower quartile, median, upper quartile, and the maximum. It conveys information about center and variability in a data set.) • Dot Plot (A <i>dot plot</i> is a plot of numerical data along a number line. Data values are represented by a dot placed in a column directly above where the data value is located on the number line.) • Frequency (A <i>frequency</i> associated with an interval used to construct a summary table or a histogram is the number of data values that are included in the interval.) • Frequency Table (A <i>frequency table</i> summarizes a data distribution. The table includes the data values (sometimes grouped into intervals) and the associated frequencies.) • Histogram (A <i>histogram</i> is a graphical representation of a numerical data set that has been grouped into intervals. Each interval is represented by a bar drawn above that interval that has a height corresponding to the number of observations in that interval or the relative frequency corresponding to that

interval.)

- **Interquartile Range (IQR)** (*Interquartile range* is a measure of variability appropriate for data distributions that are skewed. It is the difference between the upper quartile and the lower quartile of a data set and describes how spread out the middle of the data are.)
- **Mean** (The *mean* is a measure of center appropriate for data distributions that are approximately symmetric. It is the average of the values in the data set. Two common interpretations of the mean are as a “fair share” and as the balance point of the data distribution.)
- **Mean Absolute Deviation (MAD)** (The *mean absolute deviation* of a numerical data set is the mean of all the distances from the mean for that data set.)
- **Median** (The *median* is a measure of center appropriate for skewed data distributions. It is the middle value when the data are ordered from smallest to largest if the number of observations is odd and half way between the middle two observations if the number of observations is even.)
- **Relative Frequency** (A *relative frequency* associated with an interval used to construct a summary table or a histogram is equal to the number of data values that are included in the interval divided by the total number of values in the data set. It is the proportion of the data values that are included in the interval.)
- **Relative Frequency Histogram** (A *relative frequency histogram* is a histogram that is constructed using relative frequencies rather than frequencies to determine the heights of the bars.)
- **Relative Frequency Table** (A *relative frequency table* is a frequency table that displays relative frequency in addition to frequency for each data value or interval.)
- **Statistical Question** (A *statistical question* is a question that can be answered by collecting data and that anticipates variability in the data collected.)
- **Variability** (*Variability* of a data set is the extent to which data values differ from each other. Variability occurs when the observations in the data set are not all the same.)
- Line Plot or Dot Plot