



Singapore Math Key Terms: K-5

KEY TERMS	
Wonder	A sense of curiosity or questioning about a concept, pattern, or problem. It encourages students to explore, ask "what if?" questions, and seek deeper understanding .
Question	Identifying what the problem is asking you to find or solve. It involves carefully reading the problem and determining: <ul style="list-style-type: none">• What information is important?• What is the unknown?• What type of operation(s) might be needed?
Discover	Finding or identifying a strategy or pattern that will help solve the problem. It involves: <ul style="list-style-type: none">• Making connections between known concepts• Exploring possible methods (Ex: drawing a model, using an equation, trying examples)• Choosing a logical approach based on the question This step is about uncovering a path toward the solution using reasoning and insight.

CPA Sequence	A sequence that builds strong conceptual understanding and problem-solving skills by progressing from the tangible to the symbolic.
Concrete	<p>Definition: The stage where students use physical objects (manipulatives) to model problems.</p> <p>Purpose: Helps students understand concepts through hands-on experience.</p> <p>Examples: Using counters, base-ten blocks, fraction tiles, or coins.</p>
Pictorial	<p>Definition: <i>The stage where students use pictures or drawings to represent mathematical ideas.</i></p> <p>Purpose: <i>Bridges the gap between concrete experiences and abstract symbols.</i></p> <p>Examples: <i>Bar models, number bonds, diagrams.</i></p>
Abstract	<p>Definition: The stage where students use numerals and symbols to represent math problems.</p> <p>Purpose: Develops fluency with mathematical notation and operations.</p> <p>Examples: $4+3=7$</p>
BAR MODELS	
Bar Model	A pictorial representation used to solve word problems in Singapore Math.
Comparison Model	A bar model used to compare two or more quantities.
Part-Part-Whole	A model used to show how two or more parts combine to make a whole .
Part-Whole	A model that shows the relationship between a whole and its known part(s) , often used when finding the missing part .

PLACE VALUE	
Place Value	The value of a digit, based on its position in a number (e.g., in 345, the 4 is in the tens place and represents 40).
Digit	A symbol used to make numbers (0–9). Each digit has a place and a value in a number.
Ones	The first place value in a whole number; represents single units.
Tens	The second place from the right in a whole number; 1 ten = 10 ones.
Hundreds	The third place from the right in a whole number; 1 hundred = 10 tens.
Thousands	The fourth place from the right; 1 thousand = 10 hundreds.
Ten Thousands	The place value to the left of thousands; 1 ten thousand = 10 thousands.
Hundred Thousands	One hundred groups of one thousand; 1 hundred thousand = 100,000.
Millions	The place to the left of hundred thousands; 1 million = 1,000,000.
Expanded Form	A number written as the sum of the values of its digits (e.g., $345 = 300 + 40 + 5$).
Standard Form	The regular way of writing numbers using digits (e.g., 3,456).
Word Form	A number written in words (e.g., three thousand four hundred fifty-six).
Base-Ten Blocks	Concrete manipulatives representing place values (e.g., units = 1, rods = 10, flats = 100).
Number Bond (Place Value Context)	A visual model that shows how numbers can be split or combined based on place value (e.g., $63 = 60 + 3$).
Decompose	To break a number apart based on place value (e.g., $84 = 80 + 4$).
Compose	To combine parts to form a number (e.g., $30 + 5 = 35$).
Place Value Chart	A tool used to organize digits by place (e.g., thousands, hundreds, tens, ones).
Value	The worth of a digit in a number, determined by its place (e.g., the value of 2 in 2,000 is 2,000).
Greater Than / Less Than / Equal To	Terms used to compare numbers based on place value.
Rounding	Approximating a number to the nearest ten, hundred, etc., based on place value.
Estimation	Making an approximate calculation, often by rounding numbers to the nearest place value.
Decimal Point	A symbol used to separate whole numbers from fractional parts in a decimal.
Tenths	The first place to the right of the decimal point; 1 tenth = 0.1.

Hundredths	The second place to the right of the decimal point; 1 hundredth = 0.01.
Thousandths	The third decimal place; 1 thousandth = 0.001.
Decimal Place Value	Values of digits to the right of the decimal point, representing parts of a whole.
Regroup	To rearrange or exchange place values (<i>refrain from using the term “borrow”</i>)
Variable	A symbol (usually a letter) that represents a number in an expression or equation.
OPERATIONS	
Addend	A number that is added to another number.
Addition	Combining two or more parts to get a whole (<i>sum</i>).
Array	A set of objects arranged in rows and columns to model multiplication; used to determine both parts and whole.
Order of Operations	A set of rules that tells the correct sequence to evaluate a math expression.
Parentheses	Symbols used to group parts of an expression that must be evaluated first.
Pattern	A repeating or growing sequence of numbers or shapes.
Product	The answer to a multiplication problem (<i>whole</i>).
Equal Groups	Sets that have the same number of objects, used in multiplication/division.
Fact Family	A group of related math facts using the same numbers (e.g., $3 + 4 = 7$, $4 + 3 = 7$, $7 - 3 = 4$).
Multiple	A multiple of a number is the result of multiplying that number by any whole number.
Greatest Common Factor	The Greatest Common Factor of two or more numbers is the largest number that divides each of them exactly (without leaving a remainder).
Least Common Multiple	The Least Common Multiple of two or more numbers is the smallest number that is a multiple of each of them .
Difference	When one part is taken away from a whole to find the <i>missing part</i> . (<i>subtraction</i>)
Multiplication	<i>Repeated addition</i> ; combining equal groups (e.g., $3 \times 4 = 12$).
Division	Taking a whole and dividing the value into equal groups or parts.
Diviser	A number that divides another number evenly (without a remainder).

	<i>Example:</i> In the division problem $12 \div 4 = 3$, the number 4 is the divisor .
Dividend	The number that is being divided by another number. <i>Example:</i> In the same problem $12 \div 4 = 3$, the number 12 is the dividend .
Equation	A mathematical statement that shows two expressions are equal (e.g., $5 + 3 = 8$).
Evaluate	To find the value of a mathematical expression by following the correct order of operations.
Expression	A combination of numbers, variables, and operation symbols (such as +, -, \times , \div) that represents a value. Unlike an equation, it does not include an equal sign.
Inverse Operations	Opposite operations that undo each other (e.g., addition/subtraction, multiplication/division).
Quotient	The answer (equal parts) to a division problem.
FRACTIONS	
Common Denominator	A shared denominator between two or more fractions, used when comparing or adding/subtracting.
Least Common Denominator (LCD)	The smallest common multiple of the denominators of two or more fractions.
Decompose	To break a fraction into a sum of fractions with the same denominator.
Numerator	The top number in a fraction. It shows how many parts are being considered out of the whole.
Denominator	The bottom number in a fraction. It shows how many equal parts the whole is divided into .
Fraction	A number that represents part of a whole. It is written in the form $\frac{a}{b}$, where a is the numerator and b is the denominator.
Fraction Greater Than One	A fraction where the numerator is greater than or equal to the denominator. This means the value of the fraction is greater than or equal to 1 . Avoid using the term <i>improper fraction</i> .
Fraction of a Set	Describes part of a group. Ex: $\frac{1}{4}$ of 20 equals 5.
Fraction of a Whole	Describes part of a single item. Ex: $\frac{3}{8}$ of the pizza equals 3 pieces out of the whole.
Simplest Form	A fraction where the numerator and denominator have no common factors other than 1.
Unit Fraction	A fraction with a numerator of 1. Ex: $\frac{1}{3}$

PROPERTIES of MULTIPLICATION	
Associative Property	Grouping of numbers doesn't affect the sum or product (e.g., $(2 + 3) + 4 = 2 + (3 + 4)$).
Commutative Property	Numbers can be added or multiplied in any order (e.g., $2 + 3 = 3 + 2$).
Distributive Property	A method to multiply a number by breaking another number into parts (e.g., $6 \times (2 + 3) = 6 \times 2 + 6 \times 3$).
Identity Property	Any number multiplied by one is the number itself. Ex: $7 \times 1 =$ one group of 7
Zero Property	Any number multiplied by zero is zero. Ex: $7 \times 0 =$ zero groups of 7