

Common Core State Standards Mathematics

Two types of standards:

Mathematical Practice—reoccurring throughout the grades

Mathematical Content—different at each grade level

CCSS Domains	1997 CA Strands
<ul style="list-style-type: none"> • Counting and Cardinality (CC) • Operations and Algebraic Thinking (OA) • Number and Operations in Based Ten (NBT) • Number and Operations—Fractions (NF) 	<ul style="list-style-type: none"> • Algebra and Functions • Number Sense
<ul style="list-style-type: none"> • Measurement and Data (MD) • Geometry (G) 	<ul style="list-style-type: none"> • Measurement and Geometry • Statistics, Data Analysis, and Probability
<ul style="list-style-type: none"> • Standards for Mathematical Practice (embedded) 	<ul style="list-style-type: none"> • Mathematical Reasoning
<ul style="list-style-type: none"> • Ratios and Proportional Relationships (RP) • The Number System (NS) • Expressions and Equations (EE) • Functions (F) 	<ul style="list-style-type: none"> • Algebra and Functions • Number Sense
<ul style="list-style-type: none"> • Geometry (G) 	<ul style="list-style-type: none"> • Measurement and Geometry
<ul style="list-style-type: none"> • Statistics and Probability (SP) 	<ul style="list-style-type: none"> • Statistics, Data Analysis, and Probability
<ul style="list-style-type: none"> • Standards for Mathematical Practice (embedded) 	<ul style="list-style-type: none"> • Mathematical Reasoning

Domain	K	1	2	3	4	5	6	7	8
Counting and Cardinality (CC)	√								
Operations and Algebraic Thinking (OA)	√	√	√	√	√	√			
Number and Operations in Base Ten (NBT)	√	√	√	√	√	√			
Measurement and Data (MD)	√	√	√	√	√	√			
Geometry (G)	√	√	√	√	√	√	√	√	√
Number and Operations—Fractions (NF)				√	√	√			
Ratios and Proportional Relationships (RP)							√	√	
The Number System (NS)							√	√	√
Expressions and Equations (EE)							√	√	√
Statistics and Probability (SP)							√	√	√
Functions (F)									√

Grades K-5 Example: CCSS Grade Level Topics	
Grade	Topic
K	Count to 100
1	Add within 100 (sums to 100)
2	Fluently add and subtract within 100 (sums and differences to 100) Introduce foundations for multiplication and division
3	Fluently multiply and divide within 100 (products and quotients to 100)
3	Introduce fractions
4	Add and subtract fractions Introduce decimals
5	Add, subtract, multiply, and divide fractions Add, subtract, multiply, and divide decimals

Grades K-2 Example: CCSS Topics Across Grades		
K	1	2
Count to 100, write numbers (to 20)	Count, read, and write numbers (to 120)	Count, read, and write numbers (to 1,000)
Place value to 19	Place value to 100	Place value to 1,000
Fluently add and subtract (within 5)	Fluently add and subtract (within 10)	Fluently add and subtract (within 100)
Represent addition and subtraction (within 10)	Add (within 100) Subtract multiples of 10 (range 10-90)	Add and subtract (within 1,000)

Grades 3-5 Example: Fractions Across Grades		
3	4	5
Represent unit fractions on a number line	Add and subtract mixed numbers with like denominators	Add and subtract fractions with unlike denominators
Generate simple equivalent fractions	Explain why a fraction $\frac{a}{b}$ is equivalent to another fraction $\frac{n \times a}{n \times b}$	Multiply a fraction or whole number by a fraction
Compare two fractions with the same numerator or denominator	Compare two fractions with different numerators or denominators	Divide unit fractions by whole numbers and whole numbers by unit fractions

Grades 3-5 Overview	
Grade	Number and Operations—Fractions
3	Develop understanding of fractions as numbers
4	Extend understanding of fraction equivalence and ordering Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers Understand decimal notation for fractions, and compare decimal fractions
5	Use equivalent fractions as a strategy to add and subtract fractions Apply and extend previous understanding of multiplication and division to multiply and divide fractions

Grade Shifts: Examples		
Concept	1997 Standards Grade Level	CCSS Grade Level
Count from 30 to 100	1	K
Skip count by 2s, 5s, and 10s to 10	1	2
Compose simple shapes to form larger shapes (e.g., 2 triangles to form a rectangle)	2	K
Introduction of fractions as numbers	2	3
Know from memory the multiplication tables for 2s and 5s	2	
Know from memory all products of two one-digit numbers		3
Add and subtract simple fractions	3	4
Introduce probability	3	7
Graphing points on a coordinate plane	4	5
Multiply a fraction by a whole number	5	4
Dividing fractions by fractions	5	6
Concepts of mean and median to summarize data sets	5	6
Operations with numbers in scientific notation	7	8
Pythagorean Theorem	7	8