Concept	Grade 3	Grade 4	Grade 5

Continuum of Common Core Mathematics Standards Grades 3-5

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Solving and evaluating numerical expressions	Solve equations involving all four operations (throughout 3.OA and 3.NBT)	Solve equations involving all four operations (throughout 4.OA and 4.NBT)	Use parentheses, brackets and braces to evaluate expressions (5.OA.1) Interpret numerical expressions without calculating them (5.0A.2)
Add and subtract whole numbers	Fluently add and subtract within 1000 (3.NBT.2)	Fluently add and subtract multi-digit number using the algorithm (4.NBT.4)	
Addition and Subtraction-fractions	Represent a fraction *a/b* on a number line diagram by marking off *a* lengths 1/*b* from 0 (3.NF.2b)	Adding and subtraction fractions with the same numerators (4.NF.3), including understanding joining equal parts (4.NF.3a), decomposing a fraction in various ways (4.NF.3b), working with mixed numbers (4.NF.3c), and solving word problems (4.NF.3d)	Add and subtract fractions with unlike denominators (5.NF.1), including solving word problems involving fractions (5.NF.2)
Multiplication and Division-whole numbers	Interpret products (3.OA.1) and quotients (3.OA.2) Properties of operations (3.OA.5) Fluently multiply and divide within 100 (3.OA.7) Multiplication and Division (3.OA.4)	Interpret multiplication as comparison situation (4.OA.1) Find all factor pairs for numbers up to 100 (4.OA.4) Multiply a four-digit number by a one-digit number; multiply two two-digit numbers (4.NBT.5) Find whole number quotients with remainders for up to 4-digit divisors and 1-digit dividends (4.NBT.6)	Fluently multiply multi-digit numbers using standard algorithm (5.NBT.5) Solve for whole number quotients with remainders of up to four-digit divisors and up to 2-digit dividends (5.NBT.6) Solve problems with decimals through hundredths using all four operations (5.NBT.7).
Multiplication and Division-fractions		Multiply a fraction by a whole number (4.NF.4); the fraction a/b = a * (1/b) (4.NF.4a); the problem c * a/b can be written as (c*a) * (1/b) (4.NF.4b); solve word problems (4.NF.c)	Write a division of whole numbers as a fraction (e.g., if 3 brownies divided equally among 5 people, then each person receives 3/5 of a brownie) (5.NF.2) Multiply fraction or whole number by a fraction (5.NF.3)

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			Explain multiplication as resizing by comparing factors of related products (5.NF.5a) and examining whether fractions will increase or decrease when you multiply by a fraction greater than or less than 1 (5.NF.5b) Divide unit fractions by whole numbers (5.NF.7a) and whole numbers by unit fractions and (5.NF.7b)
General Problem Solving	Solve multiplication and division problems within 100 (3.OA.3) Division as an unknown factor problem (3.OA.6)	Multiply or divide to solve comparison problems (4.OA.2) Solve multi-step word problems with all four operations (4.OA.3)	Solve problems involving multiplication of fractions and mixed numbers (5.NF.6) Solve real-world problems involving division with unit fractions (5.NF.7c)
Numerical Patterns	Arithmetic patterns in addition or multiplication (3.OA.9)	Generate a number or shape pattern that follows a given rule (4.OA.5)	Generate two numerical patterns involving two different rules and identify relationships between them (5.OA.3)
Place Value- Magnitude of whole numbers	Multiply one-digit number by multiples of 10 (3.NBT.3) Add and subtract using place value strategies (e.g., expanded form) (3. NBT.2)	Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right (e.g., 700 is 10 times more than 70) (4.NBT.1) Write expanded form and number name (word form) for multi-digit whole numbers (4.NBT.2) Solve problems using place value strategies (4.NBT.4, 4.NBT.5)	Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left (5.NBT.1) Explain patterns of a product when multiplying by a power of 10 with whole numbers and decimals (5.NBT.2) Read and write decimals to the thousandths place (5.NBT.3)
Place Value- fractions/ decimals		For a fraction with a denominator of 10, write an equivalent fraction that has a denominator of 100 and add the fractions (4.NF.5)	

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		Write fractions as decimals and decimals as fractions (4.NF.6)	
Rounding	Rounding to nearest 10 or 100 (3.NBT.1)	Round multi-digit numbers to any place (4.NBT.3)	Round decimals to any place (5.NBT.4)
Fractions-understanding	Unit fraction: 1 whole divided into b parts is the fraction 1/b and that the fraction a/b is a parts of the fraction 1/b (3.NF.1)		
Fractions-models	Partition 2-d shapes into parts with equal areas (3.G.2). Fractions on a number line (3.NF.2) Represent a fraction 1/*b* on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into *b* equal parts (3.NF.2a)		
Fractions-Equality	Equivalent fractions on a number line (3.NF.3a), with a model (3.NF.3b) Write whole numbers as fractions (3.NF.3c)	Use fraction models to explain equivalent fractions (4.NF.1)	
Comparing numbers	Compare fractions with either the same numerator or same denominator (3.NF.3d)	Compare multi-digit whole numbers (4.NBT.2) Compare fractions by finding either common numerators or common denominators (4.NF.2) Compare decimals and justify reasoning (4.NF.7)	Compare decimals to the thousandths place (5.NBT.3)
Measurement	Measure and estimate mass and volume in metric units (3.MD.2) Use all operations to solve one-step word problems involving measurement (3.MD.2)	Convert measurements within the same system (4.MD.1) Use all operations to solve word problems involving distance, mass, volume, time, and	Convert measurements within the same system and solve real-world problems (5.MD.1)

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		money (4.MD.2)	
Graphing	Draw scaled bar and picture graphs (3.MD.3)

Solve one- and two-step problems involving data represented in scaled bar graphs | | |
| Measurement and Data | Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot (3.MD.4) | Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using information presented in line plots (4.MD.4) | Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Use operations on fractions for this grade to solve problems involving information presented in line plots (5.MD.2) |
| Area, Perimeter and Volume | Understand concept of area of plane figures (3.MD.5)

Measure area by counting unit squares (3.MD.6)

Relate area to multiplication and division (3.MD.7)

Area is additive in rectilinear figures (i.e., regions with right angles) (3.MD.7d)

Solve problems with perimeter; distinguish perimeter from area (3.MD.8) | Apply area and perimeter formulas to solve real world problems (4.MD.3) | Find area of a rectangle that has fractional side lengths (5.NF.4)

Recognize volume (5.MD.3), measure volume by filling and counting cubes (5.MD.4)

Relate volume to multiplication and division (5.MD.5) by finding volume of rectangular prism (5.MD.5a), applying volume formulas (5.MD.5b), and determine the volume of shapes that are composed of combined rectangular prisms (5.MD.5c) |
| Time | Time to the nearest minute; solve word problems involving intervals of time (3.MD.1) | Solve real-world problems involving time (4.MD.2) | |
| Geometry-angles | | Understanding concept of angles (4.MD.5), measure angles with protractors (4.MD.6),

Recognizing angle measure as additive; solving word problems involving adding and subtracting angle measures (4.MD.7) | |
| Geometry- | Group shapes by attributes (3.G.1) | Classify 2-dimensional figures based on | Understand the relationship between |

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shapes		perpendicular and parallel sides (4.G.2) Draw and identify points, line segments, lines, rays, and angles (4.G.1) Draw and identify parallel and perpendicular lines (4.G.1) Recognize and draw lines of symmetry (4.G.3)	attributes of 2-dimensional shapes and categories of shapes (5.G.3) Classify figures based on hierarchy of properties (5.G.4)
Coordinate Planes			Plot points in the first quadrant of a coordinate plane (5.G.1) and solve real world problems in the context of a coordinate plane (5.G.2)