Grade 5

DATE COMPLETED

NUMBERS AND OPERATIONS

Understand the place value system.

Recognize, read, and write numbers to describe whole numbers to nine digits.	M
Recognize, read, and write numbers to describe whole numbers to twelve digits.	I
Explain patterns when multiplying and/or dividing a number by powers of 10*. When you multiply 8X10=80 and 8x1,000=8,000.	I

Compare and order numbers:

Numbers beyond one thousand.	m
Decimals.	D
Fractions.	D

Round numbers:

To the nearest ten, hundred, and thousand.	m
To the nearest ten thousand.	M
To the nearest cent.	I
To the nearest dollar.	m

Fractions.

Recognize, read, and write fractions of 2/3, 2/4, 3/4, and Tenths.	m
Identify denominators and numerators.	m
Identify like fractions.	m
Identify mixed numbers.	m
Identify unlike fractions.	M
Identify and compute equivalent fractions.	M
Compute the simplest form of a fraction.	M
Identify the reciprocal of a number or fraction.	M
Know equal parts of a whole.	D
Identify and compute with mixed numbers, proper and improper fractions.	D
Identify inequalities.	D
Identify the Least Common Denominator of two or more fractions.	D
Identify the Greatest Common Factor of two or more numbers.	D

Decimals

Recognize, read, and write numbers to describe decimals to tenths, to hundredths, and thousandths.	m
Recognize, read, and write decimals to thousandths and beyond using base-ten numerals, number names, and expanded form*.	D
Recognize, read, and write numbers to compare and order decimals.	D

Grade 5

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Round decimals to any place value.	M
Recognize, read, and write repeating decimals.	I
Rename decimals as fractions and fractions as decimals.	I
Change decimals to percent and percent to decimals.	M
Change fractions to decimals and decimals to fractions.	M
Change fractions to percents and percents to fractions.	M
Recognize, read, and write numbers to the left of the decimal point through six digits.	m
Recognize, read, and write numbers to the left of the decimal point through nine digits.	M
Recognize, read, and write numbers to the right of the decimal point by one digit.	m
Recognize, read, and write numbers to the right of the decimal point by two and three digits.	M
Recognize, read, and write numbers to the right of the decimal point through six digits and beyond.	I
Recognize, read, and write Roman numerals.	D
Recognize, read, and write real numbers.	I
Identify prime and composite numbers.	I

Perform operations with multi-digit whole numbers and with decimals to hundredths.

Master facts through 12.	m
Multiply by ten, one hundred, and one thousand.	M
Compute, with or without regrouping - 2 X 2 digits and 2 X 3 digits.	m
Compute, using regrouping - 4 X 3 and higher digits.	M
Use mental math.	D
Identify products of prime numbers.	I
Identify and apply distributive property.	D
Identify and apply associative property.	D
Identify and apply commutative property.	M
Identify common multiples and least common multiples.	M
Check multiplication by dividing.	M
Multiply using dollars and cents.	M
Divide whole numbers, decimals, fractions, and remainders using 6 or more digit numbers by 3 digits.	M
Divide with dollars and cents.	D
Divide a decimal by a whole number.	I

Use equivalent fractions as a strategy to add and subtract fractions

Add and subtract fractions with unlike denominators, including mixed numbers*.	M
Estimate and solve word problems using addition and subtraction of fractions and mixed numbers.	D

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DATE COMPLETED

Apply and extend previous understandings of multiplication and division.

Interpret a fraction as division of the numerator by the denominator (a/b = a ÷ b). Solve word

Multiply a fraction by a fraction.	D
Multiply a fraction by a whole number.	D
Multiply, using whole and mixed numbers.	I
Multiply fractions using the canceling method.	I
Multiply fractions using mental math.	D
Interpret multiplication as scaling (resizing), using whole numbers, fractions, and mixed numbers *.	I

Perform operations using whole numbers and integers.

Estimate in addition.	D
Add with negative numbers.	D
Apply the commutative property of addition.	M
Apply the associative property of addition.	M
Add using mental math.	D
Estimate in subtraction.	D
Subtract any two numbers.	m
Subtract with dollars and cents.	m
Subtract using mental math.	D
Estimate in multiplication.	D
Estimate in division.	D
Define divisor, dividend, quotient, and remainder.	m
Master division facts through 12.	m
Compute with no remainder.	m
Divide by ten, one hundred, one thousand.	M
Use mental math.	D
Read and writer numbers using expanded notation.	D

Fractions an Decimals

Estimate addition and subtraction of fractions.	I
Add and subtract fractions with like denominators.	M
Add and subtract mixed numbers.	D
Add and subtract improper fraction and proper fractions.	D
Use correct decimal alignment when adding and subtracting decimals.	D
Add and subtract decimals using mental math.	D
Estimate multiplication of fractions.	D
Divide a fraction by a fraction.	I

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Divide using whole and mixed numbers.	I
Multiply fractions using the canceling method.	I
Multiply and divide using mental math.	I

Write and interpret numerical expressions.

Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols*.	D
Correctly apply order of operations.	I
Solve fraction and decimal word problems.	D

ALGEBRA

Recognize, explain, and compute ratios.	D
Recognize, explain, and compute proportions.	I
Identify unknown quantities, algebraic phrases.	M
Use a variable as a place holder.	D
Solve simple equations and expressions informally.	m

Analyze patterns and relationships.

Identify and form ordered pairs consisting of corresponding terms and graph the ordered pairs on a coordinate plane*.	I/D
Understand patterns and relationships by observing, describing, comparing, and creating.	D
Sort and classify by characteristics.	D
Predict what comes next and looking at missing elements.	D
Distinguish between growing and repeating patterns.	D
Represent information numerically, graphically, and verbally.	D
Discuss and analyze change.	D
Identify and compute ratios and proportions.	I
Identify inequalities.	M
Define "Set."	D
Solve word problems with two statements of equality.	D
Solve word problems by applying the Distance formula: Distance = rate X time.	D
Solve word problems involving unit pricing.	D

MEASUREMENT AND DATA

Make conversions of measurment units within a system.	D
Determine length using 1/8, 1/6 inch.	D

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Determine length using millimeter, centimeter, decimeter, meter, decameter, hectometer, kilometer.	D
Determine capacity using milliliter, liter, kiloliter.	D
Determine weight, mass using gram,kilogram.	D
Determine temperature using Celsius.	D

Time

Recognize, read, and write minutes before and after the hour.	m
Recognize, read, and write AM and PM.	m
Recognize, read, interpret, and create a sequence of events/timelines.	m
Solve problems involving elapsed time with and without changing units.	M
Recognize, read, interpret, and create schedules.	D
Recognize, read, and interpret time zones.	D

Money

Make change.	m

Explain and construct scale drawings.	M

GEOMETRY

Use a protractor to correctly measure and create angles.	m
Use a compass correctly.	m
Compute the circumference of a circle.	M
Compute the surface area of a prism.	I
Define, compare, measure, and calculate volume of a triangular and rectangular prism in various units.	M
Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.*	I
Define, compare, measure, and calculate perimeter and area of a square, rectangle, triangle, parallelogram, trapezoid.	M
Investigate and predict the results of slide, turn, and flip.	D
Recognize and create straight, intersecting, parallel, and perpendicular lines.	D
Identify the angle vertex.	I
Determine angle measurement.	D
Identify a right angle.	M
Identify acute, obtuse, and straight angles.	D
Identify congruent angles.	D

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Identify adjacent angles.	I
Identify types of triangles - isosceles, scalene, acute, obtuse, equilateral, and right.	I
Identify the base and height of a triangle.	D
Identify quadrilaterals, parallelograms, rhombuses, trapezoids.	D
Identify pentagons, hexagons, octagons.	D
Identify the center, chord, diameter, Pi, and radius of a circle.	D
Identify and measure the degrees and arc of a circle.	I
Identify irregular shapes.	D
Identify solid figures - cubes, cylinders, sphere, cones.	m
Identify pyramids.	D
Determine symmetry.	D

Construct convincing arguments and proofs to solve problems using geometric figures and patterns:

Using simple materials.	M
Using diagrams.	D
Using technology.	D
Develop, formulate, and communicate logical arguments.	D

STATISTICS AND PROBABILITY

Collect and describe data.	D
Interpret and create picture and bar graphs.	m
Interpret and create tables.	D
Interpret and create circle graphs.	D
Interpret and create Venn diagrams.	D
Identify and label dependent and independent variables.	I
Determine or compute mean, median, mode, range.	D
Compute probability: permutations, combinations, single events.	D
Conduct surveys, experiments, demonstrate and design data collections methods.	D
Make inferences by drawing conclusions, communicating results, and making decisions/predictions.	D
Discuss and analyze change by measuring and comparing quantities.	D
Discuss and analyze change by using tables and graphs.	D

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Represent and interpret data

Create a line plot to display a data set.*	D

Graph points on the coordinate plane to solve real-world and mathematical problems.

Read and create solid line graphs.	M
Read and create broken line graphs.	M
Use a coordinate system to represent real world and mathematical problems using the first quadrant.	I/D

PROBLEM SOLVING

Analyze and plan the problem determining the appropriate strategy by:

Drawing pictures.	D
Creating original problems.	D
Determining if information is sufficient to solve.	D
Relating to an easier problem.	D
Using tables, graphs, and diagrams.	D
Relating to an easier problem.	D
Using tables, charts, graphs, and diagrams.	D
Using trial and error.	D
Working backwards.	D
Sorting, classifying, and using patterns.	D
Using estimation.	D
Choosing the correct operation.	D
Solve problems involving percents both less than and greater than 100%.	D
Check reasonableness of solutions.	D