Common Core Standard	Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
Counting & Cardinality							
• Know number names and the count sequence.	D	M	M	M	M	M	M
• Know number names and write and recite the count sequence.	D	M	M	M	M	M	M
• Count to tell the number of objects.	D	M	M	M	M	M	M
• Apply one-to-one correspondence to count the number of objects.	D	M	M	M	M	M	M
• Compare numbers.	I	D	M	M	M	M	M
• Apply the concept of magnitude to compare numbers and quantities.	I	D	M	M	M	M	M
Numbers & Operations in Base Ten							
• Use place value to compose and decompose numbers within 19.	D	M	M	M	M	M	M
• Extend the counting sequence to read and write numerals to represent objects.	I	D	M	M	M	M	M
• Use place-value concepts to represent amounts of tens and ones and to compare two digit numbers.	I	D	M	M	M	M	M

Use place-value concepts and properties of operations to add and subtract within 100.	I	D	D	M	M	M	M
Use place-value concepts to represent amounts of tens and ones and to compare three-digit numbers.	I	I	D	M	M	M	M
Use place-value concepts to read, write, and skip count to 1000.	I	I	D	M	M	M	M
Use place-value understanding and properties of operations to add and subtract within 100.	I	D	D	M	M	M	M
Apply place-value understanding and properties of operations to perform multi-digit arithmetic.		I	D	D	D	M	M
Apply place-value concepts to show an understanding of multi-digit whole numbers.		I	D	D	D	M	M
Use place-value understanding and properties of operations to perform mutli-digit arithmetic.		I	D	D	D	M	M
Apply place-value concepts to show an understanding of operations and rounding as they pertain to whole numbers and decimals.		I	D	D	M	M

Numbers & Operations –Fractions							
• Explore and develop an understanding of fractions as numbers.	I	D	D	D	D	D	D
• Extend the understanding of fractions to show equivalence and ordering.		I	D	D	D	M	M
• Build fractions from unit fractions by applying and extending previous understandings of operations of whole numbers.		I	D	D	D	M	M
• Connect decimal notation to fractions, and compare decimal fractions (base 10 denominator, ex. 19/100).				I	D	D	M
• Use the understanding of equivalency to add and subtract fractions.			I	I	D	M	M
• Apply and extend previous understandings of multiplication and division to multiply and divide fractions.					I	D	M
Numbers & Operations–Ratios & Proportional Relationships							
• Understand ratio concepts and use ratio reasoning to solve problems.			I	I	I	D	M
Numbers & Operations–The Number System							
• Apply and extend previous understandings of multiplication and division to divide fractions by fractions.						D	M

• Identify and choose appropriate processes to compute fluently with multi-digit numbers.			I	D	D	M	M
• Develop and/or apply number theory concepts to find common factors and multiples.					I	D	M
• Apply and extend previous understandings of numbers to the system of rational numbers.					I	D	M
Algebraic Concepts–Operations & Algebraic Thinking • Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.	D	M	M	M	M	M	M
• Extend the concepts of putting together and taking apart to add and subtract within 10.							
• Represent and solve problems involving addition and subtraction within 20.	D	M	M	M	M	M	M
• Understand and apply properties of operations and the relationship between addition and subtraction.	D	M	M	M	M	M	M
• Represent and solve problems involving addition and subtraction within 100.	I	D	M	M	M	M	M
	I	D	D	M	M	M	M

Use mental strategies to add and subtract within 20.	I	D	M	M	M	M	M
Work with equal groups of objects to gain foundations for multiplication.			D	M	M	M	M
Represent and solve problems involving multiplication and division.			I	D	M	M	M
Understand properties of multiplication and the relationship between multiplication and division.				I	D	M	M
Demonstrate multiplication and division fluency.			I	D	M	M	M
Solve problems involving the four operations, and identify and explain patterns in arithmetic.			I	D	M	M	M
Represent and solve problems involving the four operations.		I	I	D	M	M	M
Develop and/or apply number theory concepts to find factors and multiples.		I	I	D	M	M	M
Generate and analyze patterns using one rule.					I	D	M
Interpret and evaluate numerical expressions using order of operations.		D	D	M	M	M	M
Analyze patterns and relationships using two rules.					I	D	M

I / I	D	D	D	D	M	M
Algebraic Concepts–Expressions & Equations						
• Apply and extend previous understandings of arithmetic to algebraic expressions.		I	D	D	M	M
• Understand the process of solving a one-variable equation or inequality and apply it to real-world and mathematical problems.		I	D	D	M	M
• Represent and analyze quantitative relationships between dependent and independent variables.						D
Geometry						
• Identify and describe shapes.	I	D	D	M	M	M	M
• Analyze, compare, create, and compose shapes.	I	D	D	M	M	M	M
• Identify and describe two- and three- dimensional shapes.	I	D	M	M	M	M	M
• Analyze, compare, create, and compose two- and three- dimensional shapes.	I	I	D	M	M	M	M
	I	I	D	M	M	M	M

Skill							
Compose and distinguish between two- and three- dimensional shapes based on their attributes.							
Use the understanding of fractions to partition shapes into halves and quarters.	I	M	M	M	M	M	M
Analyze and draw two- and three- dimensional shapes having specified attributes.	I	I	D	M	M	M	M
Use the understanding of fractions to partition shapes into halves, quarters, and thirds.	I	I	D	D	M	M	M
Identify, compare, and classify shapes and their attributes.	I	D	M	M	M	M	M
Use the understanding of fractions to partition shapes into parts with equal areas and express the area of each part as a unit fraction of the whole.		I	D	D	D	M	M
Draw lines and angles and identify these in two-dimensional figures.			I	D	D	M	M
Classify two- dimensional figures by properties of their lines and angles.					I	D	M
Recognize symmetric shapes and draw lines of symmetry.	I	I	D	D	M	M	M

• Graph points in the first quadrant on the coordinate plane and interpret these points when solving real world and mathematical problems.					I	D	M
• Classify two-dimensional figures into categories based on an understanding of their properties. • Apply appropriate tools to solve real-world and mathematical problems involving area, surface area, and volume.	I	D	D	D	M	M	M
	I	I	D	D	D	M	M
Measurement, Data, and Probability • Describe and compare measureable attributes of length and weight of everyday objects.	I	D	M	M	M	M	M
• Classify objects and count the number of objects in each category.	D	M	M	M	M	M	M
• Describe and compare attributes of length, area, weight, and capacity of everyday objects.	I	D	D	M	M	M	M
• Order lengths and measure them both indirectly and by repeating length units.	I	D	D	M	M	M	M
• Tell and write time to the nearest half hour using both analog and digital clocks.		D	M	M	M	M	M

Standard							
Measure and estimate lengths in standard units using appropriate tools.	I	I	D	D	M	M	M
Tell and write time to the nearest five minutes using both analog and digital clocks.			D	M	M	M	M
Solve problems and make change using coins and paper currency with appropriate symbols.		I	D	D	D	M	M
Represent and interpret data using line plots, picture graphs, and bar graphs.	I	D	D	D	D	M	M
Extend the concept of addition and subtraction to problems involving length.	I	I	D	D	D	M	M
Solve problems involving measurement and estimation of temperature, liquid volume, mass, and length.		I	I	D	D	D	M
Tell and write time to the nearest minute and solve problems by calculating time intervals.			I	D	D	M	M
Solve problems and make change involving money using a combination of coins and bills.			I	D	D	D	M
Represent and interpret data using tally charts, tables, pictographs, line plots, and bar graphs.							
Determine the area of a rectangle and apply the concept of multiplication and addition.	I	D	D	D	M	M	M

Objective							
• Solve problems involving perimeters of polygons and distinguish between linear and area measures.			I	D	D	M	M
• Solve problems involving measurement and conversions from a larger unit to a smaller unit.							
• Translate information from one type of data display to another.				I	D	D	M
• Represent and interpret data involving fractions using information provided in a line plot.			I	I	I	D	M
• Measure angles and use properties of adjacent angles to solve problems.	I	I	D	D	D	M	M
• Solve problems using conversions within a given measurement system.						D	M
• Represent and interpret data using appropriate scale.					I	I	D
• Solve problems involving computation of fractions using information provided in a line plot.					I	D	M
• Apply concepts of volume to solve problems and relate volume to multiplication and addition.		I	I	D	D	D	M
						D	M

• Demonstrate an understanding of statistical variability by displaying, analyzing, and summarizing distributions.						D	M
						I	D
Basic Math Facts							
• Procedural knowledge of figuring out math facts–counting skills.	I	M	M	M	M	M	M
• Strategies for remembering facts based on relationships (ex. Commutative properties, fact families, doubles, links one known fact to an unfamiliar fact)–**Addition & Subtraction**	I	D	M	M	M	M	M
• Strategies for remembering facts based on relationships (ex. Fact Families, Distributive Property)–**Multiplication & Division**	I	D	D	D	M	M	M
• Automaticity (answer in less than one second OR answer 40–60 questions correctly per minute with 1–2 mistakes) of math facts–declarative knowledge.	I	D	D	D	M	M	M

Kindergarten				
	1st 9 weeks	2nd 9 weeks	3rd 9 weeks	4th 9 weeks
Addition Facts to 5				90 seconds

Subtraction Facts to 5				90 seconds

First Grade				
	1st 9 weeks	2nd 9 weeks	3rd 9 weeks	4th 9 weeks
Addition Facts to 5	90 seconds			
Addition Facts to 8		90 seconds		
Addition Facts to 10			90 seconds	90 seconds
Subtraction Facts to 5	90 seconds	90 seconds		
Subtraction Facts to 10			90 seconds	90 seconds

Second Grade				
	1st 9 weeks	2nd 9 weeks	3rd 9 weeks	4th 9 weeks
Addition Facts to 15	90 seconds			
Addition Facts to 20		90 seconds	60 seconds	60 seconds
Subtraction Facts to 15	90 seconds			
Subtraction Facts to 20		90 seconds	60 seconds	60 seconds
Multiplication Facts(1,2,5,10)				90 seconds

Third Grade				
	1st 9 weeks	2nd 9 weeks	3rd 9 weeks	4th 9 weeks
Addition Facts to 20	60 seconds	60 seconds	60 seconds	60 seconds
Subtraction Facts to 20	60 seconds	60 seconds	60 seconds	60 seconds
Multiplication Facts(1,2,5,10)	90 seconds			
Multiplication Facts(1,2,3,4,5, and 10)		90 seconds		
Multiplication Facts(Up to 12 x 12)			90 seconds	60 seconds

Fourth Grade				
	1st 9 weeks	2nd 9 weeks	3rd 9 weeks	4th 9 weeks
Addition Facts to 20	60 seconds	60 seconds	60 seconds	60 seconds
Subtraction Facts to 20	60 seconds	60 seconds	60 seconds	60 seconds
Multiplication Facts(Up to 12x12)	60 seconds	60 seconds	60 seconds	60 seconds
Division Facts related to Multiplication Facts			90 seconds	60 seconds

Rockwood Grade Level Math Fact Fluency Expectations

Math Fact Fluency Scoring Criteria Correct Problems in 60 sec/90 sec	
Advanced	34 and above
Proficient	22-33
Basic	16-21

Below Basic	0-15