

## 5<sup>th</sup> grade Math Common Core Pacing Guide

Target Standard	“I Can” statements	Vocabulary	Time Frame
<p>Chapter 1: 5.NBT.1- Recognize that in multi-digit number, a digit in one place represents 10 times as much as it represents to its right and 1/10 of what it represents to its left. 5.NBT.3- read, write and compare decimals to thousandths</p>	<ul style="list-style-type: none"> <li>• I can understand and explain the value of digits. 5.NBT.1</li> <li>• I can read write and compare decimals to the thousandths. 5.NBT.3</li> </ul>	<p>Decimal point Decimal Equivalent decimals Expanded form Period Place Standard form Place value</p>	<p><b>Trimester 1</b></p>
<p>Chapter 2: 5.NBT.2- Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10. 5.NBT.5- Fluently multiply multi-digit whole numbers using the standard algorithm</p>	<ul style="list-style-type: none"> <li>• I can explain patterns when multiplying a number by powers of 10. 5.NBT.2</li> <li>• I can explain patterns when a decimal is multiplied or divided by a power of 10. 5.NBT.2</li> <li>• I can multiply multi-digit whole numbers 5.NBT.5</li> </ul>	<p>Base Compatible numbers Cubed Distributive property Exponent Power Powers of 10 Prime factorization</p>	<p><b>Trimester 1</b></p>
<p>Chapter 3 5.NBT.6- Find whole-number quotients of whole numbers with up to four- digit dividends and two- digit divisors, using based strategies on place value, the properties of operations and/or the relationship between multiplication and division. Illustrate and explain the</p>	<ul style="list-style-type: none"> <li>• I can divide four-digit dividends by two digit divisors. 5.NBT.6</li> <li>• I can illustrate and explain a division problem using equations, arrays and/or models. 5.NBT.6</li> </ul>	<p>Dividend Divisor Fact family Partial quotients Quotients Remainder Unknown Variable</p>	<p><b>Trimester 1</b></p>

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calculations by using equations, rectangular arrays and/or area models.			
Chapter 4 5.NBT.6- Find whole-number quotients of whole numbers with up to four- digit dividends and two- digit divisors, using based strategies on place value, the properties of operations and/or the relationship between multiplication and division. Illustrate and explain the calculations by using equations, rectangular arrays and/or area models.	<ul style="list-style-type: none"> <li>I can divide four-digit dividends by two digit divisors. 5.NBT.6</li> <li>I can illustrate and explain a division problem using equations, arrays and/or models. 5.NBT.6</li> </ul>	Dividend Divisor Fact family Partial quotients Quotients Remainder Unknown Variable	<b>Trimester 2</b>
Chapter 5 5.NBT.4- Use place value understanding to round decimals to any place. 5.NBT.7- Add, subtract, multiply and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	<ul style="list-style-type: none"> <li>I can use place value understanding to round decimals to any place. 5.NBT.4</li> <li>I can add, subtract, multiply, and divide decimals to hundredths. I can use concrete models or drawings to explain the method used. 5.NBT.7</li> </ul>	Associative property of addition Commutative property of addition Identity property of addition Inverse operations	<b>Trimester 2</b>
Chapter 6 5.NBT.2- Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.	<ul style="list-style-type: none"> <li>I can explain patterns when multiplying a number by powers of 10. 5.NBT.2</li> <li>I can explain patterns when a decimal is multiplied or divided by a power of 10. 5.NBT.2</li> <li>I can multiply multi-digit whole numbers 5.NBT.5</li> <li>I can add, subtract, multiply, and</li> </ul>	Associative property of addition Commutative property of addition Identity property of addition Inverse operations	<b>Trimester 2</b>

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<p>5.NBT.5- - Fluently multiply multi-digit whole numbers using the standard algorithm</p> <p>5.NBT.7- - Add, subtract, multiply and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.</p>	<p>divide decimals to hundredths. I can use concrete models or drawings to explain the method used. 5.NBT.7</p>		
<p>Chapter 7</p> <p>5.OA.1- use parentheses, brackets, or braces in numerical expressions and evaluation expressions with these symbols</p> <p>5.OA.2- write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them</p> <p>5.OA.3- generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from two patterns, and graph the ordered pairs on a coordinate plane.</p> <p>5.G.1-use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using</p>	<ul style="list-style-type: none"> <li>• I can use parentheses and brackets in expressions. 5.OA.1</li> <li>• I can write expressions I hear using mathematics symbols and the order of the operations. 5.OA.2</li> <li>• Use numerical rules and patterns to form ordered pairs. Graph the ordered pairs on a coordinate plane. 5.OA.3</li> <li>• I understand how to graph ordered pairs on a coordinate plane. 5.G.1</li> <li>• I can graph and interpret points in the first quadrant of a coordinate plane. 5.G.2</li> </ul>	<p>Coordinate plane Evaluate Numerical expression Ordered pair Order of operations Origin Sequence term</p>	<p><b>Trimester 2</b></p>

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<p>ordered pair of numbers, called coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond.</p> <p>5.G.2- Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane and interpret coordinate values of points in the context of the situation.</p>			
<p>Chapter 8</p> <p>5.NF.2- Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.</p> <p>5.NF.3- Interpret a fraction as division of the numerator by the denominator (<math>a/b = a</math> divided by <math>b</math>). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers e.g., by using visual fractions models or equations to represent the problem.</p>	<ul style="list-style-type: none"> <li>• I can solve word problems that involve fractions. 5.NF.2</li> <li>• I can understand that fractions are really the division of a numerator by a denominator. 5.NF.3</li> <li>• I can think of multiplication as the scaling of the number (similar to a scale on a map) 5.NF.5</li> <li>• I can multiply multi-digit whole numbers 5.NBT.5</li> <li>•</li> </ul>	<p>Common factor Common multiple Denominator Equivalent fractions Fractions Greatest common factor (GCF) Least common denominator (LCD) Least common multiple (LCM) Multiple Numerator Simplest form</p>	<p><b>Trimester 3</b></p>

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<p>5.NF.5b- Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than given number (recognizing multiplication by the whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence <math>\frac{a}{b} = \frac{n \times a}{n \times b}</math> to the effect of multiplying <math>\frac{a}{b}</math> by 1.</p> <p>5.NBT.5- Fluently multiply multi-digit whole numbers using the standard algorithm</p>			
<p>Chapter 9</p> <p>5.NF.1-Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators.</p> <p>5.NF.2- Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of</p>	<ul style="list-style-type: none"> <li>• I can add and subtract fractions with unlike denominators and mixed numbers. 5.NF.1</li> <li>• I can solve word problems that involve fractions. 5.NF.2</li> </ul>	<p>Like fractions</p> <p>Unlike fractions</p> <p>Like denominators</p> <p>Unlike denominators</p>	<p><b>Trimester 3</b></p>

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answers.			
<p>Chapter 10</p> <p>5.NF.4- Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.</p> <p>5.NF.4a- Interpret the product <math>(a/b) \times q</math> as a parts of a partition of <math>q</math> into <math>b</math> equal parts; equivalently, as the result of a sequence of operations <math>a \times q \div b</math>. For example, use a visual fraction model to show <math>(2/3) \times 4 = 8/3</math>, and create a story context for this equation. Do the same with <math>(2/3) \times (4/5) = 8/15</math>. (In general, <math>(a/b) \times (c/d) = ac/bd</math>.)</p> <p>5.NF.4b- Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.</p> <p>5.NF.5a- Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.</p> <p>5.NF.6- Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to</p>	<ul style="list-style-type: none"> <li>• I can multiply a fraction or whole number by a fraction 5.NF.4</li> <li>• I can think of multiplication as the scaling of a number (similar to a scale on a map) 5.NF.5</li> <li>• I can solve real world by multiplying fractions and mixed numbers 5.NF.6</li> <li>• I can divide fractions by whole numbers and whole numbers by fractions. 5.NF.7</li> </ul>	<p>Common factor Common multiple Denominator Equivalent fractions Fractions Greatest common factor (GCF) Least common denominator (LCD) Least common multiple (LCM) Multiple Numerator Simplest form Scaling Unit fraction</p>	<p style="text-align: center;"><b>Trimester 3</b></p>

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<p>represent the problem.</p> <p>5.NF.7a- Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. For example, create a story context for <math>(1/3) \div 4</math>, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that <math>(1/3) \div 4 = 1/12</math> because <math>(1/12) \times 4 = 1/3</math>.</p> <p>5.NF.7b- Interpret division of a whole number by a unit fraction, and compute such quotients. For example, create a story context for <math>4 \div (1/5)</math>, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that <math>4 \div (1/5) = 20</math> because <math>20 \times (1/5) = 4</math>.</p> <p>5.NF.7c- Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. <i>For example, how much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 1/3-cup servings are in 2 cups of raisins?</i></p>			
<p>Chapter 11</p> <p>5.MD.1- Convert among different-sized standard measurement units within a</p>	<ul style="list-style-type: none"> <li>I can convert measurements within the same measuring system.</li> </ul> <p>5.MD.1</p>	<p>Capacity Centimeter Convert</p>	

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<p>given measurement system (e.g., convert 5 cm to 0.05m) and use these conversions in solving multi-step, real world problems.</p> <p>5.MD.2 Make a line plot to display a data set of measurements in fractions of a unit (<math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, <math>\frac{1}{8}</math>). Use operations on fractions for this grade to solve problems involving information presented in line plots.</p>	<ul style="list-style-type: none"> <li>I can make a line plot to display data sets of measurements in fractions. 5.MD.2</li> <li>I can use fraction operations to solve problems involving information presented on a line plot. 5.MD.2</li> </ul>	<p>Cup Customary system Fair share Fluid ounce (fl oz) Foot (ft) Gallon (gal) Gram (g) Inch (in) Kilogram (kg) Kilometer (km) Length Liter (L) Mass Meter (m) Metric system Mile (mi) Milligram (mg) Millimeter (mm) Ounce (oz) Pint (pt) Pound (lb) Quart (qt) Ton (T) Weight Yard (yd)</p>	<p style="text-align: center;"><b>Trimester 3</b></p>
<p>Chapter 12 5.G.3- Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles. 5.G.4- Classify two-dimensional figures</p>	<ul style="list-style-type: none"> <li>I can classify shapes into categories. 5.G.3</li> <li>I can classify shapes based on properties. 5.G.4</li> <li>I can understand volume 5.MD.3</li> <li>I can measure volume by counting unit cubes. 5.MD.4</li> <li>I can solve real world problems involving volume. 5.MD.5</li> </ul>	<p>Acute triangle Attribute Base Composite figure Congruent angle Congruent figures Congruent sides Cube Cubic unit</p>	<p style="text-align: center;"><b>Trimester 3</b></p>



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<p>in a hierarchy based on properties.</p> <p>5.MD.3- Recognize volume as an attribute of solid figures and understand concepts of volume measurement.</p> <p>5.MD.4 - Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.</p> <p>5.MD.5- Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.</p> <p>5.MD.5b- Apply the formulas <math>V = l \times w \times h</math> and <math>V = b \times h</math> for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems.</p> <p>5.MD.5c- Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.</p>	<ul style="list-style-type: none"> <li>I can find the volume of an object using the formulas <math>V = l \times w \times h</math> and <math>V = b \times h</math> 5.MD.5</li> </ul>	<p>Edge</p> <p>Equilateral triangle</p> <p>Face</p> <p>Hexagon</p> <p>Isosceles triangle</p> <p>Net</p> <p>Obtuse triangle</p> <p>Octagon</p> <p>Parallelogram</p> <p>Pentagon</p> <p>Polygon</p> <p>Prism</p> <p>Rectangle</p> <p>Rectangular prism</p> <p>Regular polygon</p> <p>Rhombus</p> <p>Right triangle</p> <p>Scalene triangle</p> <p>Square</p> <p>Three-dimensional figure</p> <p>Trapezoid</p> <p>Triangular prism</p> <p>Unit cube</p> <p>Vertex</p> <p>volume</p>	
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Assessments	Resources
<p>Weekly fluency quizzes</p> <p>Unit Pre-test</p> <p>Chapter/Unit Tests</p>	<p>My Math (student, teacher, and online resources)</p> <p>Front Row</p>