



# Ganado Unified School District (Math/5<sup>th</sup> Grade)



## PACING Guide SY 2016 - 2017

Timeline & Resources	AZ College and Career Readiness Standard	Essential Question (HESS Matrix)	Learning Goal	Vocabulary (Content/Academic)
<p><b><u>QUARTER 1:</u></b>            McGraw-Hill Math Resources  <b><u>Chapter 1- Place value</u></b>            Lesson 1            Lesson 2:            Lesson: 3            Lesson: 4            Lesson 5:            Lesson 6:            Lesson 7:            Lesson 8:            Lesson 9:            -Step-By-Step Model</p>	<p><b>5.NBT.1.</b> 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.</p> <p><b>5.NBT.3a.</b> Read, write, and compare decimals to thousandths.</p> <p><b>a.</b> Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., <math>347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)</math>.</p> <p><b>b.</b> Compare two decimals to thousandths based on meanings of the digits in each place, using <math>&gt;</math>, <math>=</math>, and <math>&lt;</math></p>	<p>• Essential Question:            How does the position of a digit in a number relate to its value?</p>	<p>I will be able to:</p> <ul style="list-style-type: none"> <li>• Compare and order whole numbers through millions</li> <li>• Use models to relate decimals in fractions</li> <li>• Represent fractions that name tenths, hundredths and thousandths as decimals</li> <li>• Understand place value in decimal numbers</li> <li>• Read and write decimals in standard form; expanded form, and word form</li> <li>• Compare decimals</li> <li>• Order whole numbers and decimals</li> <li>• Solve problems using the four step plan</li> </ul>	<ul style="list-style-type: none"> <li>• Place value chart</li> <li>• Standard forms</li> <li>• Expanded form</li> <li>• Decimal points</li> <li>• Decimals</li> <li>• period</li> <li>• Place</li> <li>• Equivalent decimals</li> </ul>

<p>Drawing Strategy -Accelerated Math Program -ATI/Galileo Program</p>	<p>symbols to record the results of comparisons.</p>			
<p>McGraw-Hill Math Resources <u>Chapter 2</u> <u>Multiplying Whole Numbers</u> Lesson 1: Lesson 2: Lesson 3: Lesson 4: Lesson 5: Lesson 6:  -Step-By-Step Model Drawing Strategy Workbooks -Accelerated Math Program -ATI/Galileo Program</p>	<p><b>5.NBT.4.</b> Use place value understanding to round decimals to any place.</p> <p><b>5.NBT.7.</b> 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><b>5.BNT.5</b> Fluently multiply multi-digit whole numbers using the standard algorithm.</p>	<p>Essential Questions: What strategies can be used to multiply whole numbers?</p> 	<p>I will be able to:</p> <ul style="list-style-type: none"> <li>• Find the prime factorization of numbers</li> <li>• Explore patterns in prime factorization</li> <li>• Use powers and exponents in expressions</li> <li>• Use basic facts and patterns to multiply multiples of 10, 100 and 1,000 mentally</li> <li>• Make a table to solve problems</li> <li>• Explore multiplication by using area models</li> <li>• Use the Distributive Property to multiply mentally</li> <li>• Estimate products by using rounding and compatible number</li> <li>• Multiply up to a three-digit number by a one-digit number</li> <li>• Multiply up to a three-digit number by a two-digit number</li> </ul>	<ul style="list-style-type: none"> <li>• Prime factorization</li> <li>• Exponents</li> <li>• Base</li> <li>• Power</li> <li>• Squared</li> <li>• Cubed</li> <li>• Powers of 10</li> </ul>
<p>-McGraw-Hill Math Resources</p>	<p><b>5.NBT.2</b> Explain patterns in the number of zeroes of the product when multiplying a number by</p>	<ul style="list-style-type: none"> <li>• <b>Essential Question:</b></li> </ul>	<p>I will be able to:</p>	<ul style="list-style-type: none"> <li>• Partial quotients</li> <li>• Fact family</li> <li>• Unknown</li> </ul>

<p>Lesson 7: Lesson 8: Lesson 9: Lesson 10: <b>Chapter 3</b> <b>Dividing by</b> <b>one-digit</b> <b>divisor</b> Lesson 1: Lesson 2: Lesson 3: Lesson 4: Lesson 5: Lesson 6: Lesson 7: Lesson 8: Lesson 9: Lesson 10: Lesson 11: Lesson 12: Lesson 13:</p> <p>Multiplying Whole Numbers -Step-By-Step Model Drawing Strategy Workbooks -Accelerated Math Program</p>	<p>powers of 10, and explain patterns in the 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.</p> <p><b>5.NBT.5</b> Fluently multiply multi-digit whole numbers using the standard algorithm.</p> <p><b>5.NBT.6</b> Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.</p>	<p>What strategies can be used to divide whole numbers?</p>	<ul style="list-style-type: none"> <li>• Student will understand how multiplication and division are related.</li> <li>• Students will explore division using models.</li> <li>• Students will carry out division with and without remainders.</li> <li>• Students will use basic facts and patterns to divide multiples of 10, 100, 1,000 mentally</li> <li>• Students will estimate quotients by using rounding and compatible numbers.</li> <li>• Students will explore division with greater numbers using models.</li> <li>• Students will divide using the distributive property and partial quotients.</li> <li>• Students will divide up to a four digit number by a one digit number.</li> <li>• Students will understand how to place the first digit in a quotient.</li> <li>• Students will solve division problems that result in quotients that have zeros.</li> <li>• Students will explore how to interpret the remainder in a division problem.</li> <li>• Students will interpret the remainder in a division problem.</li> <li>• Students will identify extra information or missing</li> </ul>	<ul style="list-style-type: none"> <li>• Variable</li> <li>• Dividend</li> <li>• Divisor</li> <li>• Quotients</li> <li>• Remainder</li> </ul>
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<p>-ATI/Galileo Program</p>			<p>information needed to solve a problem.</p>	
<p>McGraw-Hill Math Resources</p> <p>Dividing by 1-Digit Divisors</p> <p>-Double Division Strategy</p> <p>-Step-By-Step Model Drawing Strategy</p> <p>-Accelerated Math Program</p> <p>-ATI/Galileo Program</p> <p>-FASTT Math</p>	<p><b>5.NBT.6.</b> Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.</p> <p><b>5.OA.2.</b> Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. <i>For example, express the calculation “add 8 and 7, then multiply by 2” as <math>2 \times (8 + 7)</math>. Recognize that <math>3 \times (18932 + 921)</math> is three times as large as <math>18932 + 921</math>, without having to calculate the indicated sum or product.</i></p>			
<p>McGraw-Hill Math Resources</p> <p>ATI/Galileo Program</p> <p>-FASTT Math</p>	<p><b>5.NBT.6.</b> Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.</p>		<ul style="list-style-type: none"> <li>• Find whole-number quotients of the whole numbers with up to four-digit dividends and two digit-divisors, using strategies based on _____ (place value, properties of operations, the relationship between multiplication and division).</li> </ul>	<ul style="list-style-type: none"> <li>• Whole-Number Quotients</li> <li>• Four-Digit Dividends</li> <li>• Two-Digit Divisors</li> <li>• Place Value</li> <li>• Properties of Operations</li> </ul>



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## (Math/5<sup>th</sup> Grade)

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Timeline & Resources	AZ College and Career Readiness Standard	Essential Question (HESS Matrix)	Learning Goal	Vocabulary (Content/Academic)
<p><b><u>QUARTER 2:</u></b>            McGraw-Hill Math Resources            Chapter 4:            Divide by Two-Digit divisor            Lesson 1;            Lesson 2            Lesson 3:            Lesson 4            Lesson 5            Lesson 6</p> <p>-Step-By-Step Model            Drawing Strategy            Workbooks            -Accelerated Math Program</p>	<p><b>5.NBT.6.</b> Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models</p>	<p>* Essential Question:            What strategies can I use to divide by a two-digit number?</p>	<p>I will be able to:</p> <ul style="list-style-type: none"> <li>• Students will estimate quotients with two digit divisors.</li> <li>• Students will explore dividing by two digit divisors using models.</li> <li>• Students will divide up to a three digit number by a two digit divisor.</li> <li>• Students will adjust the quotient when the estimated digit is too high.</li> <li>• Students will divide greater numbers by multi-digit divisors.</li> <li>• Students will solve problems by solving a simpler problem.</li> </ul>	<ul style="list-style-type: none"> <li>• Review words from previous lessons</li> </ul>

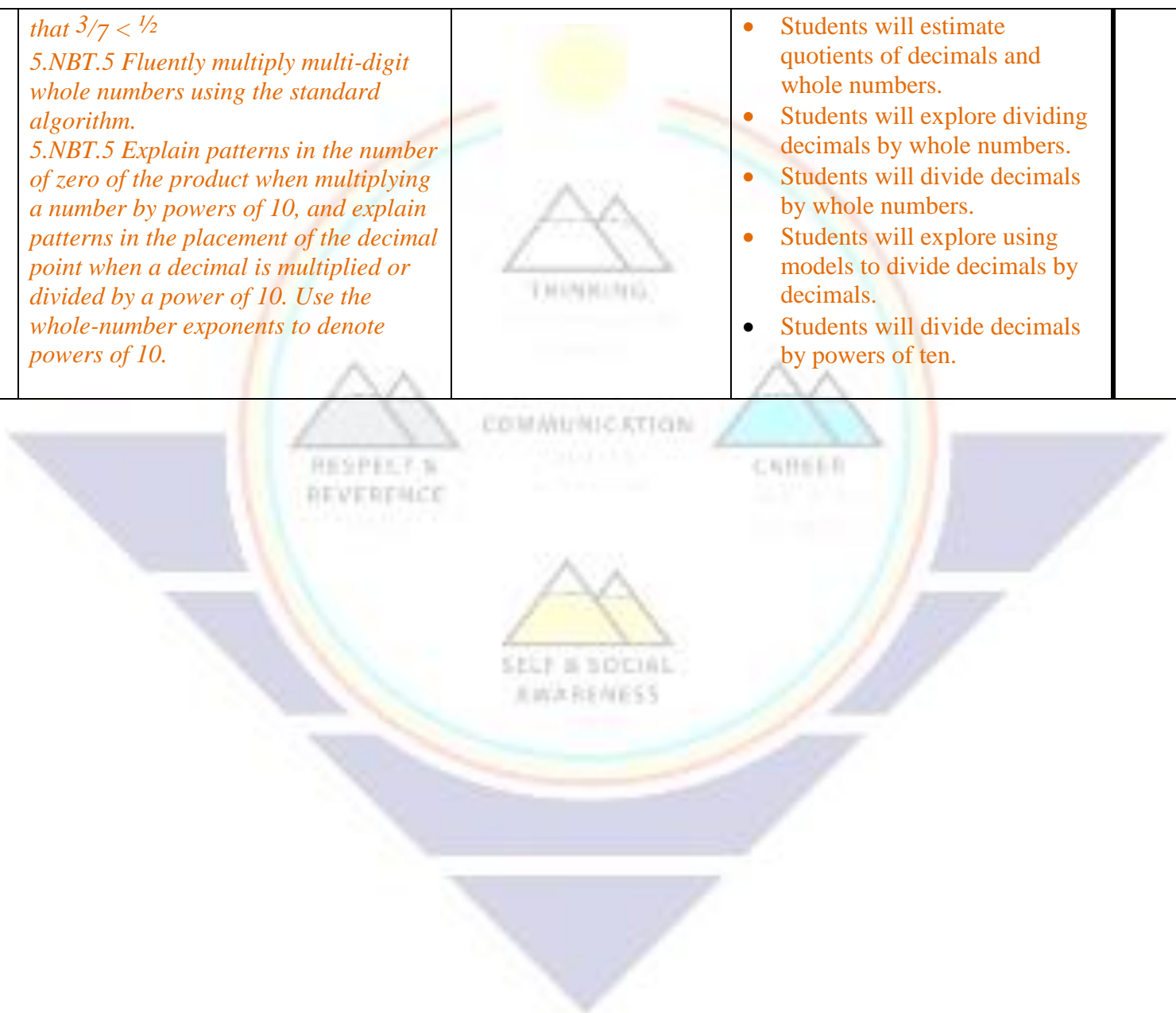
<p>-ATI/Galileo Program -FASTT Math</p>				
<p>McGraw-Hill Math Resources Chapter 5 Add and subtract decimals Lesson 6 Lesson 7 Lesson 8 Lesson 9 Lesson 10</p> <p>-Step-By-Step Model Drawing Strategy -Accelerated Math Program -ATI/Galileo Program -FASTT Math</p>	<p><b>5.NBT.4 Use place value understanding to round decimals to any place.</b></p> <p><b>5.NBT.7 Add, subtract, multiply, and divided decimals to hundredths, using concrete models or drawings and strategies based on place values, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.</b></p>	<ul style="list-style-type: none"> <li>• Essential Question: How can I use place value and properties to add and subtract decimals</li> </ul>	<p>I will be able to:</p> <ul style="list-style-type: none"> <li>• Students will round decimals.</li> <li>• Students will estimate sums and differences by rounding.</li> <li>• Students will solve problems by using an estimate or an exact answer.</li> <li>• Students will explore adding decimals using base ten blocks.</li> <li>• Students will explore adding decimals using models.</li> <li>• Students will add decimals.</li> <li>• Students will use the associative commutative and identity properties to add whole numbers and decimals mentally.</li> <li>• Students will explore subtracting decimals using base ten blocks.</li> <li>• Students will explore subtracting decimals using models.</li> <li>• Students will subtract decimals.</li> </ul>	<ul style="list-style-type: none"> <li>• Commutative property of addition</li> <li>• Associative property of addition</li> <li>• Identity property of addition</li> <li>• Inverse operations</li> </ul>
<p>McGraw-Hill Math Resources Chapter 5 Numerical Expressions, Patterns, and Relationship</p>	<p><b>5.OA.1</b> Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.</p> <p><b>5.OA.2</b> Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. <i>For example, express</i></p>			

<p>-Step-By-Step Model Drawing Strategy Workbooks -Accelerated Math Program -ATI/Galileo Program -FASTT Math</p>	<p><i>the calculation “add 8 and 7, then multiply by 2” as <math>2 \times (8 + 7)</math>.</i> <i>Recognize that <math>3 \times (18932 + 921)</math> is three times as large as <math>18932 + 921</math>, without having to calculate the indicated sum or product. 5.MP.2. Reason abstractly and quantitatively.</i></p> <p><b>5.OA.3</b> Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. <i>For example, given the rule “Add 3” and the starting number 0, and given the rule “Add 6” and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.</i></p>			
<p>Chapter 5 Adding and Subtracting Fractions Envision Math Resources  -Step-By-Step Model</p>	<p><b>5.NF.1</b> 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. <i>For example, <math>\frac{2}{3} + \frac{5}{4} = \frac{8}{12} + \frac{15}{12} = \frac{23}{12}</math>. (In general, <math>\frac{a}{b} + \frac{c}{d} = \frac{ad + bc}{bd}</math>.)</i></p>	<ul style="list-style-type: none"> <li>• How do I add and subtract fractions with unlike denominators?</li> <li>• How do I solve word problems involving addition and subtraction of fractions referring to the same whole?</li> </ul>		

<p>Drawing Strategy -Accelerated Math Program -ATI/Galileo Program -FASTT Math</p>	<p><b>5.NF.2</b> 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. <i>For example, recognize an incorrect result <math>2/5 + 1/2 = 3/7</math>, by observing that <math>3/7 &lt; 1/2</math></i></p>	<ul style="list-style-type: none"> <li>• How I use benchmark fractions and number sense of fractions to estimate mentally and to check for reasonableness of answers?</li> </ul>		
<p>McGraw-Hill Math Resources Chapter 6 Lesson 1 Lesson 2 Lesson 3 Lesson 4 Lesson 5 Lesson 6 Lesson 7 Lesson 8 Lesson 9 Lesson 10 Lesson 11 Lesson 12 Lesson 13 Lesson 14 5 Adding and Subtracting Mixed Numbers</p>	<p><b>5.NF.1</b> 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. <i>For example, <math>2/3 + 5/4 = 8/12 + 15/12 = 23/12</math>. (In general, <math>a/b + c/d = (ad + bc)/bd</math>.)</i></p> <p><b>5.NF.2</b> 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. <i>For example, recognize an incorrect result <math>2/5 + 1/2 = 3/7</math>, by observing</i></p>	<ul style="list-style-type: none"> <li>• Essential Questions: How is multiplying and dividing decimals similar to multiply and dividing whole numbers.</li> </ul>	<ul style="list-style-type: none"> <li>• Students will estimate products of whole numbers and decimals.</li> <li>• Students will explore multiplying decimals by whole numbers.</li> <li>• Students will multiply decimals by whole numbers.</li> <li>• Students will explore using decimal models to multiply decimals</li> <li>• Students will multiply decimals by decimals.</li> <li>• Students will multiply decimals by powers of ten.</li> <li>• Students will solve problems by looking for a pattern.</li> <li>• Students will use the associative commutative and identity properties to multiply mentally.</li> </ul>	<ul style="list-style-type: none"> <li>• Associative property of multiplication</li> <li>• Commutative property of multiplication</li> <li>• Identity property of multiplication</li> </ul>



<p>-Step-By-Step Model Drawing Strategy Workbooks -Accelerated Math Program -ATI/Galileo Program -FASTT Math</p>	<p><i>that <math>3/7 &lt; 1/2</math></i> <i>5.NBT.5 Fluently multiply multi-digit whole numbers using the standard algorithm.</i> <i>5.NBT.5 Explain patterns in the number of zero of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use the whole-number exponents to denote powers of 10.</i></p>		<ul style="list-style-type: none"> <li>• Students will estimate quotients of decimals and whole numbers.</li> <li>• Students will explore dividing decimals by whole numbers.</li> <li>• Students will divide decimals by whole numbers.</li> <li>• Students will explore using models to divide decimals by decimals.</li> <li>• Students will divide decimals by powers of ten.</li> </ul>	
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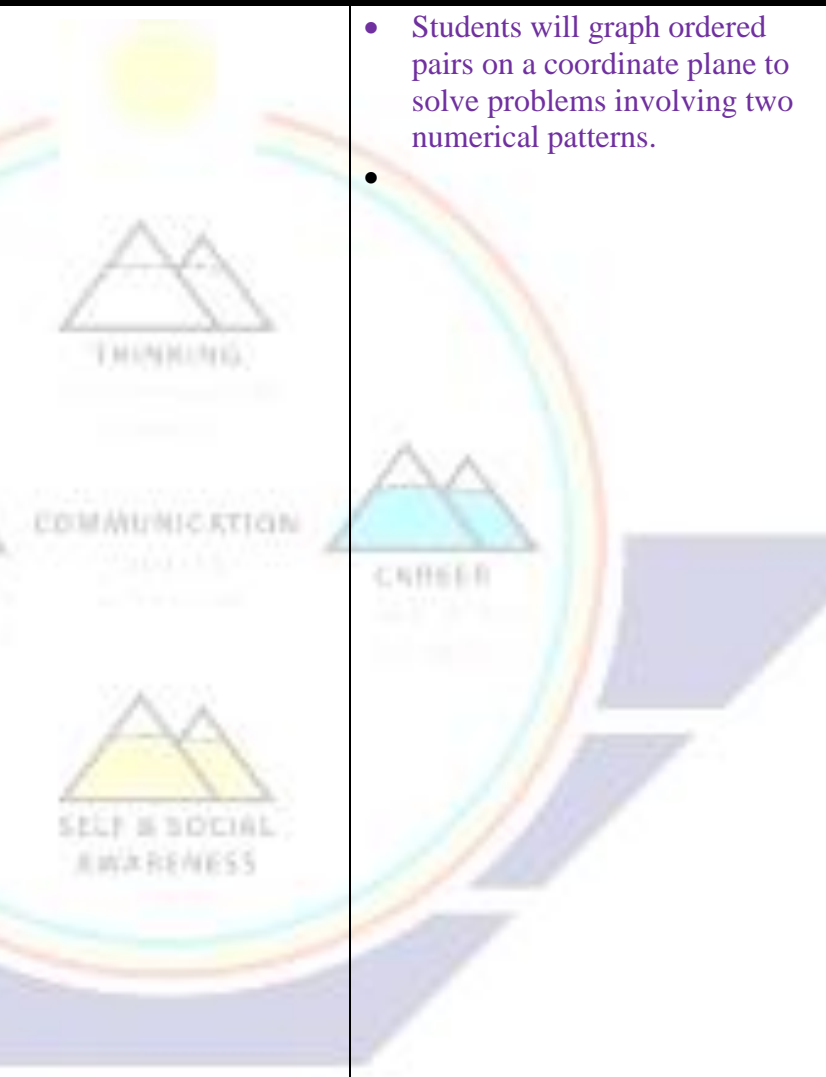


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## (Math/5<sup>th</sup> Grade)

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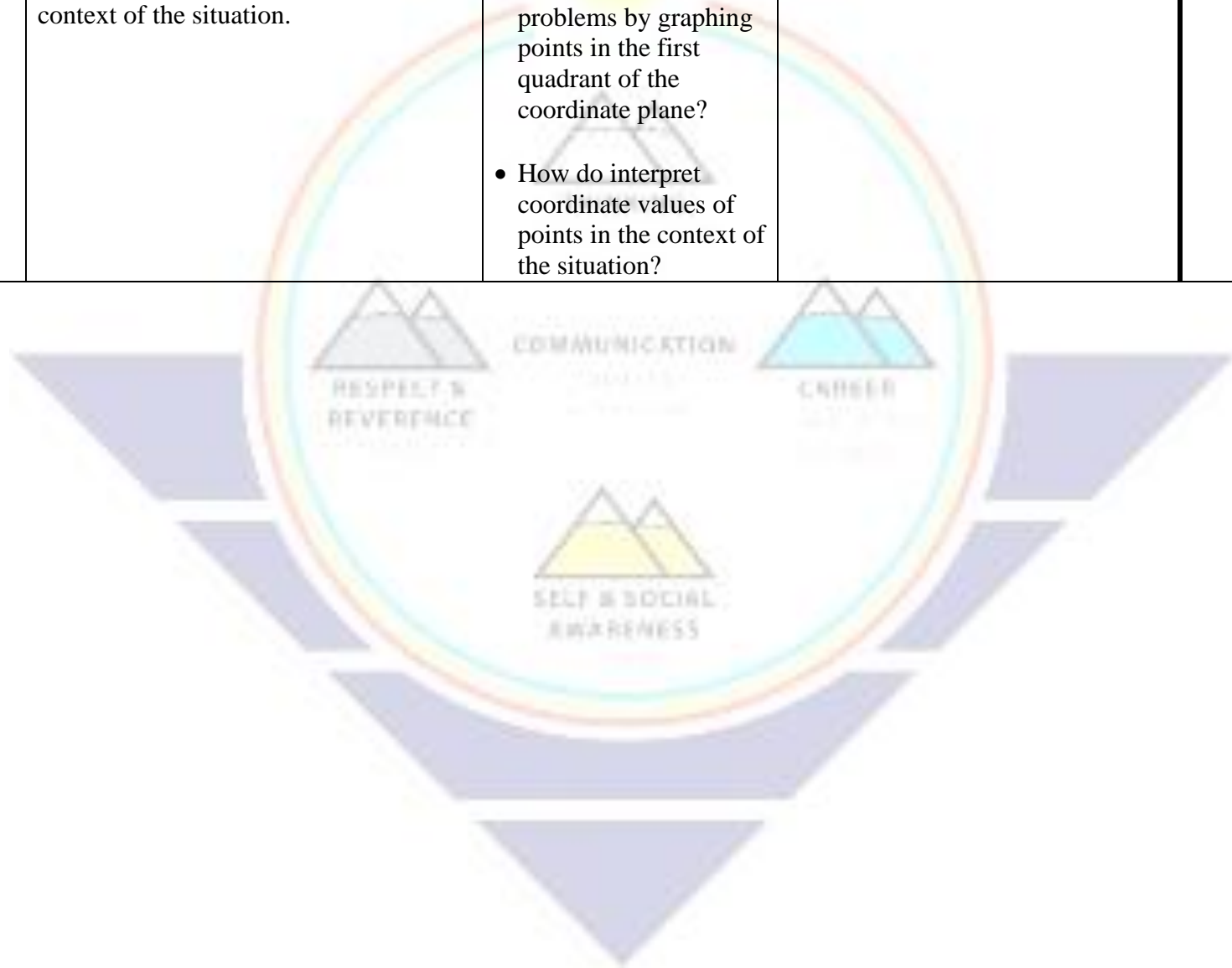
Timeline & Resources	AZ College and Career Readiness Standard	Essential Question (HESS Matrix)	Learning Goal	Vocabulary (Content/Academic)
<p><b><u>QUARTER 3:</u></b></p> <p>McGraw-Hill Math Chapter 7 Lesson 1 Lesson 2 Lesson 3 Lesson 4 Lesson 5 Lesson 5 Lesson 7 Lesson 8 Lesson 9 Multiplying and Dividing Fractions and Mixed Numbers -Step-By-Step Model Drawing Strategy</p>	<p><b>5.NF.3</b> Interpret a fraction as division of the numerator by the denominator (<math>a/b = a \div 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 fraction models or equations to represent the problem. <i>For example, interpret <math>3/4</math> as the result of dividing 3 by 4, noting that <math>3/4</math> multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size <math>3/4</math>. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?</i></p> <p><b>5.NF.4</b> Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.</p>	<p>• Essential Question: How are patterns used to solve problems</p> <ul style="list-style-type: none"> <li>• How can equivalent fractions help me add and subtract fractions</li> <li>• How are factors and multiples helpful in solving problems</li> </ul>	<p>I will be able to:</p> <ul style="list-style-type: none"> <li>• Student will write and evaluate numerical expressions.</li> <li>• Students will use the order of operations to evaluate expressions</li> <li>• Students will use numbers and operation symbols to write verbal phrases as numerical expressions.</li> <li>• Students will solve problems by working backward.</li> <li>• Students will generate numerical patterns and identify pattern.</li> <li>• Have students identify and extend patterns and sequences.</li> <li>• Students will plot points on a grid to solve real world problems.</li> <li>• Students will graph points on a coordinate plane to solve real world and mathematical problems.</li> </ul>	<ul style="list-style-type: none"> <li>• Numerical expressions</li> <li>• Evaluate</li> <li>• Order of operations</li> <li>• Sequence</li> <li>• Term</li> <li>• Coordinate plane</li> <li>• Origin</li> <li>• Ordered pair</li> <li>• X-coordinate</li> <li>• Y-coordinate</li> </ul>

<p>Workbooks -Accelerated Math Program -ATI/Galileo Program -FASTT Math Chapter 8 Lesson 6 Lesson 7 Lesson 8 Lesson 9</p>	<p>a. 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>b. 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.</p> <p><b>5.NF.5</b> Interpret multiplication as scaling (resizing), by:</p> <p>a. 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>b. Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the</p>		<ul style="list-style-type: none"> <li>• Students will graph ordered pairs on a coordinate plane to solve problems involving two numerical patterns.</li> <li>•</li> </ul>	
<p>-McGraw-Hill Math Resources Chapter 8</p>	<p><b>5.MD.3.</b> Recognize volume as an attribute of solid figures and understand concepts of volume measurement.</p> <p>a. A cube with side length 1 unit, called a “unit cube,” is said to have “one</p>	<ul style="list-style-type: none"> <li>• How are factors and multiples helpful in solving problem</li> </ul>		<ul style="list-style-type: none"> <li>• Fraction</li> <li>• numerator</li> <li>• Denominator</li> <li>• Common factors</li> </ul>

<p>Volume of Solids</p> <p>-Step-By-Step Model Drawing Strategy Workbooks</p> <p>-Accelerated Math Program</p> <p>-ATI/Galileo Program</p> <p>-FASTT Math</p>	<p>cubic unit” of volume, and can be used to measure volume.</p> <p>b. A solid figure, which can be packed without gaps or overlaps using <math>n</math> unit cubes, is said to have a volume of <math>n</math> cubic units.</p> <p><b>5.MD.4.</b> Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.</p> <p><b>5.MD.5.</b> Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.</p> <p>a. Find the volume of a right rectangular prism with whole- number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.</p> <p>b. 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>c. Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular</p>		<ul style="list-style-type: none"> <li>• Greatest common factor</li> <li>• Simplest form</li> <li>• Equivalent fractions</li> <li>• Multiple</li> <li>• Common multiples</li> <li>• Least common multiples</li> <li>• Least common denominator</li> <li>•</li> </ul>
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	prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.			
<p>McGraw-Hill Math Resources Chapter 9 Units of Measure</p> <p>-Step-By-Step Model Drawing Strategy Workbooks -Accelerated Math Program -ATI/Galileo Program -FASTT Math</p>	<p><b>5.MD.1.</b> Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problem.</p>	<ul style="list-style-type: none"> <li>• How do I convert among different sized standard measurement units within a given measurement system?</li> </ul>		<ul style="list-style-type: none"> <li>• Like fraction</li> <li>• Unlike fraction</li> </ul>
<p>Chapter 9 Data McGraw-Hill Math Resources -Step-By-Step Model Drawing Strategy Workbooks -Accelerated Math Program</p>	<p><b>5.MD.2.</b> 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. <i>For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.</i></p> <p><b>5.G.2.</b> Represent real world and mathematical problems by graphing</p>	<ul style="list-style-type: none"> <li>• How do I 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>, and <math>\frac{1}{8}</math>)?</li> <li>• How do I use operations on fractions to solve problems involving information presented in line plots?</li> </ul>		<ul style="list-style-type: none"> <li>• Line Plot</li> <li>• Unit</li> <li>• Operations</li> <li>• Real World Problems</li> <li>• Quadrant</li> <li>• Coordinate Plane</li> <li>• Coordinate Values</li> <li>• Context of the Situation</li> </ul>


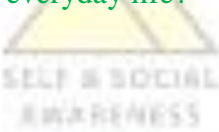
<p>-ATI/Galileo Program -FASTT Math</p>	<p>points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.</p>	<ul style="list-style-type: none"> <li>• How do show real world and mathematical problems by graphing points in the first quadrant of the coordinate plane?</li> <li>• How do interpret coordinate values of points in the context of the situation?</li> </ul>		
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## PACING Guide SY 2016 - 2017

Timeline & Resources	AZ College and Career Readiness Standard	Essential Question (HESS Matrix)	Learning Goal	Vocabulary (Content/Academic)
<p><b><u>QUARTER 4:</u></b></p> <p>McGraw-Hill Math Resources <b>Chapter 10- Multiply &amp; divide fractions</b> <b>Lesson 1 -12</b></p> <p>- Step-By-Step Model -Drawing Strategy Workbooks -Accelerated Math Program -ATI/Galileo Program -FASTT Math</p>	<p><b>5.NF.4a Interpret the product <math>(a/b) \times q</math> as a part 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</math> divided by <math>b</math>. For example, use a visual fraction model to show <math>(2/3) \times 4 = 8/3</math></b></p> <p><b>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.</b></p> <p><b>5.G.4. Classify two-dimensional figures in a hierarchy based on properties.</b></p>	<p><b>*Essential Question:</b> What strategies can be used to multiply and divide fractions?</p>	<p>I will be able to:</p> <ul style="list-style-type: none"> <li>• Students will explore how to find part of a number.</li> <li>• Students will estimate products of fractions using compatible numbers and rounding.</li> <li>• Students will explore multiplying whole numbers and fractions using models.</li> <li>• Students will multiply using whole numbers and fractions.</li> <li>• Students will explore using models by multiplying fraction by a fraction.</li> <li>• Students will multiply using mixed numbers.</li> <li>• Students will interpret multiplications of fractions using scaling.</li> <li>• Students will divide whole numbers by unit fractions using models.</li> </ul>	<ul style="list-style-type: none"> <li>• scaling</li> <li>• unit fraction</li> <li>• metric system</li> <li>• centimeters</li> <li>• millimeters</li> <li>• meter</li> <li>• kilometer</li> <li>• mass</li> <li>• gram</li> <li>• kilogram</li> <li>• liter</li> <li>• hexagon</li> <li>• pentagon</li> <li>• polygon</li> <li>• congruent angles</li> <li>• congruent sides</li> <li>• regular polygons</li> <li>• attribute</li> <li>• equilateral</li> <li>• isosceles</li> <li>• scalene</li> <li>• acute</li> <li>• obtuse</li> </ul>

			<ul style="list-style-type: none"> <li>• Students will use bar diagrams to divide whole numbers by unit fractions.</li> <li>• Students will use bar diagrams to divide unit fractions by whole numbers.</li> <li>• Students will solve problems by drawing a diagram.</li> </ul>	
<p>McGraw-Hill Math Resources  <b>Chapter 11- Measurement Lesson 1 -12</b></p> <p><b>Chapter 12- Geometry Lesson 1 12</b>  -Step-By-Step Model  Drawing Strategy  -Accelerated Math Program  -ATI/Galileo Program  -FASTT Math</p>	<p><b>5.G.1.</b> 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 an ordered pair of numbers, called its 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 (e.g., <math>x</math>-axis and <math>x</math>-coordinate, <math>y</math>-axis and <math>y</math>-coordinate).</p> <p><b>5.G.2.</b> 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>	<ul style="list-style-type: none"> <li>• Essential Questions: How can I use measurement conversion to solve real-world problems</li> <li>• How does geometry help me solve problems in everyday life?</li> </ul> 	<p>I will be able to:</p> <ul style="list-style-type: none"> <li>• Students will measure length to the nearest half inch and quarter inch.</li> <li>• Students will convert measurements of length within the customary system.</li> <li>• Students will solve problems by using logical reasoning.</li> <li>• Students will estimate the weight of objects and use a balance to measure the weight of objects.</li> <li>• Students will convert measurements of weight within the customary system.</li> <li>• Have students classify two dimensional figures based on properties.</li> <li>• Students will measure the sides and angles of triangles.</li> </ul>	<ul style="list-style-type: none"> <li>• Capacity</li> <li>• Cups</li> <li>• Pints</li> <li>• Gallons</li> <li>• Capacity</li> <li>• Fluid ounce (fl. Oz.)</li> <li>• Cup(c)</li> <li>• Pints(pt.)</li> <li>• Quart(qt.)</li> <li>• Fair share</li> <li>• Metric system</li> <li>• Centimeters</li> <li>• Millimeter</li> <li>• Meter</li> <li>• kilometer</li> <li>• mass</li> <li>• gram</li> <li>• kilogram</li> <li>• liter</li> <li>• hexagon</li> <li>• pentagon</li> <li>• polygon</li> </ul>



	<p><b>5.OA.3.</b> Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. <i>For example, given the rule “Add 3” and the starting number 0, and given the rule “Add 6” and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.</i></p>		<ul style="list-style-type: none"> <li>• Students will classify triangles based on attributes such as side measures and angle measures.</li> <li>• Students will measure the sides and angles of quadrilaterals.</li> <li>• Students will classify quadrilaterals based on attributes such as congruent sides, parallel sides and right angles.</li> <li>• Students will build nets and explore properties of three dimensional figures.</li> <li>• Students will describe properties of three dimensional figures.</li> <li>• Students will use models to find the volume of rectangular prisms.</li> <li>• Students will use a volume formula to find the volume of rectangular prism.</li> <li>• Students will use models to build composite figures and find the volume of composite figures.</li> <li>• Students will find the volume of composite by relating volume to the operations of multiplication and addition.</li> <li>• Students will make a model to solve problems.</li> </ul>	<ul style="list-style-type: none"> <li>• octagon</li> <li>• congruent angles</li> <li>• congruent sides</li> <li>• regular polygon</li> <li>• attributes</li> <li>• equilateral</li> <li>• isosceles</li> <li>• scalene</li> <li>• acute</li> <li>• obtuse</li> <li>• right</li> <li>• trapezoid</li> <li>• parallelogram</li> <li>• rectangle</li> <li>• rhombus</li> <li>• square</li> <li>• three dimensional figure</li> <li>• net</li> <li>• cube</li> <li>• congruent figures</li> </ul>
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