

<b>NBT</b>	<b>OA</b>	<b>GEO &amp; OA</b>	<b>NF</b>
Partial quotients & finding the missing “factor”	Using brackets and braces & simplifying expressions	Coordinate system & graphing—Before & after Thanksgiving Break Numerical patterns	Understanding Fractions—Before Christmas Break
7-10 days	8-10 days	7 days	5-7 days

**NBT (7-10 days)**

**Partial quotients & finding the missing “factor” (M.5.9)**

<b>Conceptual Flow</b>	<ul style="list-style-type: none"> <li>Connect previous work to partial quotients by connecting decomposing numbers into multiples of a given number to “breaking” a given area into those small pieces. M.5.9</li> <li>Extend to 4-digit dividends and 1-digit divisors. M.5.9</li> </ul>	<ul style="list-style-type: none"> <li>Connect partial quotients to missing side length of a rectangle when knowing the area and one side length. M.5.9</li> <li>Connect to place value and properties. M.5.9</li> </ul>	<ul style="list-style-type: none"> <li>Extend to work with 2-digit divisors. M.5.9</li> </ul>
<b>Essential Goals</b>	<ul style="list-style-type: none"> <li>Understand that when dividing it is important to separate into multiples of the divisor. Be fluent in doing so.</li> <li>Understand that when dividing using the area model you are given a side length and the area and you are trying to find the other side length.</li> <li>Extend work with 1-digit divisors to 2-digit.</li> </ul>		
<b>Ongoing Ideas</b>	<ul style="list-style-type: none"> <li>The relationship between partial quotients and the rectangular area model.</li> <li>Understand the relationship between multiplication, division, and area.</li> </ul>		
<b>Daily Math Warm-Ups (Number Talk Style)</b>	<ul style="list-style-type: none"> <li>Continue to “skip count” using language such as “1 multiple of 4 is 4, 2 multiples of 4 is 8,…” with starting values 1 to 9.</li> <li>Continue warm-ups in which students are given side lengths and they must find the area of a rectangle.</li> <li>Continue warm-ups in which students are given the area and one side of a rectangle and they find the other side length.</li> </ul>		
<b>Activity suggestions</b>	<ul style="list-style-type: none"> <li>If <math>64 = 40</math> and <math>24</math> and</li> </ul> <div style="text-align: center;"> <math display="block">4 \begin{array}{ c c } \hline ? &amp; ? \\ \hline 40 &amp; 24 \\ \hline \end{array}</math> </div> <p>then <math>64 \div 4 = 40 \div 4 + 24 \div 4</math></p> <p>(Record with and without parentheses to preview work with order of operations)</p> <ul style="list-style-type: none"> <li>Factor Find, <i>Fundamentals</i>, Red Book - pg. 28-29 (Play throughout unit)</li> <li><b>My Math:</b> pages 195-200 &amp; 221-226</li> </ul>	<div style="text-align: center;"> <math display="block">4 \begin{array}{ c c } \hline 10 &amp; 6 \\ \hline 40 &amp; 24 \\ \hline \end{array}</math> <math display="block">64 \div 4 = 10 + 6</math> <p>Record multiple ways.</p> <math display="block">64 \div 4</math> <math display="block">64 \div 4 = 40 \div 4 + 24 \div 4</math> <math display="block">\begin{array}{r} 16 \\ 4 \overline{)64} \end{array}</math> </div>	<div style="text-align: center;"> <math display="block">15 \begin{array}{ c c } \hline 6 &amp; 1 \\ \hline 90 &amp; 15 \\ \hline \end{array}</math> <math display="block">105 \div 15 = 6 + 1</math> <ul style="list-style-type: none"> <li><a href="#">Partial Quotients Lesson</a></li> <li><b>My Math:</b> use Student Book page 203 for partial quotients</li> <li>Module 4, <i>Math in Practice</i> – pg. 91-98</li> </ul> </div>

## Grade 5--Second Nine Weeks

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### OA (8-10 days)

#### Using Brackets and Braces--Simplifying expressions (M.5.1 & M.5.2)

<b>Conceptual Flow</b>	<ul style="list-style-type: none"> <li>Review and solidify conceptual language translations for the operations. Foundation for M.5.2</li> </ul>	<ul style="list-style-type: none"> <li>Establish the purpose of parentheses, brackets and braces (Be sure that students understand that you do not have to use them in that order but whatever you open with you must close with the same symbol. You could also use only parentheses as is done on the calculator or computer). Foundation for M.5.2</li> <li>Begin to translate more complex expressions (understand the importance of a comma and pausing at the comma) e.g., <math>3 \times (4 + 5)</math> is 3 groups of, 4 put together with 5.</li> <li><math>3 \times 4 + 5</math> is 3 groups of 4, joined with 5. Foundation for M.5.1 &amp; M.5.2</li> </ul>	<ul style="list-style-type: none"> <li>Evaluate expressions with parentheses, brackets or braces M.5.1</li> <li>Given in words, write the related expression using parentheses when needed M.5.1</li> <li>Give story problems (+, -, x, ÷), write possible expression. M.5.1 &amp; M.5.2</li> </ul>
<b>Essential Goals</b>	<ul style="list-style-type: none"> <li>Understand that the order of operations flows from the way in which we read numeric expressions.</li> <li>Understand when parentheses are required and when they aren't.</li> </ul>		
<b>Ongoing Ideas</b>	<ul style="list-style-type: none"> <li>Understand the relationship of multiples and factors.</li> <li>Understand the relationship between multiplication, division, and area.</li> <li>Use conceptual language translations for the operations.</li> </ul>		
<b>Daily Math Warm-Ups (Number Talk Style)</b>	<ul style="list-style-type: none"> <li>During previous number talks, used parentheses to record students' thinking. Now discuss if required, not needed, or helpful for clarity. Highlight in simple problems such as <math>9+5 = 10 + 4</math>; <math>9 + 5 = 9 + (1 + 4) = (9 + 1) + 4 = 10 + 4</math> OR <math>25 \times 8 = 25 \times (4 \times 2) = (25 \times 4) \times 2 = (4 \times 25) \times 2</math>. This allows us to link to the Associative and Commutative Properties.</li> <li>Toward end of this sequence begin to have students record using parentheses, brackets, and braces.</li> <li><a href="#">Red Think Tank Cards (Brackets/Braces and Expressions)</a></li> </ul>		
<b>Activity suggestions</b>	<ul style="list-style-type: none"> <li>Have students write the meaning of simple numeric expressions in words.</li> <li>Reference conceptual language activities</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Expression Lesson</a></li> <li>Choose and Use, <i>Fundamentals</i>, Red Book pg. 8-11</li> <li><a href="#">Brayden's Video Game</a></li> <li>Check <a href="http://www.cpalms.org">www.cpalms.org</a> for extra resources</li> <li>Module 2, <i>Math in Practice</i> – pg. 48-54</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Example Story Problems</a></li> <li>Word problem graphic organizer. pp 89-97, <i>Creating a Language-Rich Math Class</i>.</li> <li><a href="#">Bowling for Numbers</a></li> <li>Module 2, <i>Math in Practice</i> – pg. 54-65</li> <li><b>My Math:</b> pages 481-504</li> </ul>

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### GEO-Coordinate System and Graphing—Recommend before & after Thanksgiving Break (M.5.23 & M.5.24)

#### OA-Numerical Patterns (M.5.3)

(7 days)

<b>Conceptual Flow</b>	<ul style="list-style-type: none"> <li>Recommended the week of Thanksgiving break—establish a need for a coordinate system. Foundation for M.5.23</li> </ul>	<ul style="list-style-type: none"> <li>When return from Thanksgiving break—continue establishing a need for a coordinate system. Foundation for M.5.23</li> </ul>	<ul style="list-style-type: none"> <li>Construct the coordinate grid using two numbers lines. Introduce and use terms such as coordinates, ordered pair, x-axis, y-axis, coordinate plane, etc. M.5.23</li> <li>Graph ordered pairs on a coordinate plane with a given rule. M.5.3</li> <li>Students explain informally the relationship. M.5.3</li> </ul>	<ul style="list-style-type: none"> <li>Represent real-world problems by graphing points in the first quadrant of a coordinate plane. Interpret values in the context of the situation. M.5.24</li> </ul>
<b>Essential Goals</b>	<ul style="list-style-type: none"> <li>Understand that a coordinate grid consists of two number lines, one horizontal and one vertical.</li> <li>Understand that the convention is that the first coordinate is the horizontal movement, and the second coordinate is the vertical movement.</li> <li>Understand and correctly use coordinate system conventions. (e.g., the 1<sup>st</sup> number in an ordered pair describes horizontal movement and the second, vertical)</li> </ul>			
<b>Ongoing Ideas</b>	<ul style="list-style-type: none"> <li>Understand that the order of operations flows from the way in which we read numeric expressions.</li> <li>Understand when parentheses are required and when they aren't.</li> <li>Understand the relationship between multiplication, division, and area.</li> </ul>			
<b>Daily Math Warm-Ups (Number Talk Style)</b>	<ul style="list-style-type: none"> <li>Whole number, number line work</li> <li>Numerical patterns—Guess my rule M.5.3</li> <li>Numerical patterns—Generate patterns given a rule. M.5.3</li> <li>Numerical patterns—Identify the relationships between corresponding terms from two patterns. M.5.3</li> <li><a href="#">Red Think Tank Cards (Coordinate Grid and Number Patterns)</a></li> </ul>			
<b>Activity suggestions</b>	<ul style="list-style-type: none"> <li><a href="#">Odd Shape Directions</a></li> <li><a href="#">Odd Shape Communication Cards</a></li> <li><a href="#">Grids</a></li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Graphing Points</a></li> </ul>	<ul style="list-style-type: none"> <li>Refer to work on the grids during Odd shape communication activities.</li> <li><a href="#">What shape am I?</a></li> <li><a href="#">Dan's Bicycle</a></li> <li>Module 14, <i>Math in Practice</i> – pg. 263-281</li> <li>Where is the Rectangle, <i>Mindset Mathematics</i> – pg. 129-132</li> <li><b>My Math:</b> pages 507-518 &amp; 525-530</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Coordinate Grid Battleship</a></li> <li><a href="#">Moving Around the Neighborhood</a></li> <li><b>My Math:</b> pages 519-524 &amp; 531-536</li> <li><a href="#">Coordinate Grid 1st Quad Game</a></li> <li><a href="#">Coordinate Grid All Quad Game</a></li> </ul>

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### NF (5-7 days)

### Understanding Fractions—Recommend before Christmas Break (M.5.11, M.5.12, M.5.13, M.5.14, M.5.15, M.5.16 & M.5.17)

<b>Conceptual Flow</b>	<ul style="list-style-type: none"> <li>Review and solidify—representing fractions (concrete &amp; pictorial), find relationships, mixed numbers, name fractional parts). Foundation for M.5.11-17</li> <li>Review and solidify (by building, drawing, and words) equivalency relationships such as “How many fourths in two and a half?” Foundation for M.5.11-17</li> </ul>	<ul style="list-style-type: none"> <li>Review and solidify the relationship between mixed numbers and improper fractions. Foundation for M.5.11-17</li> </ul>
<b>Essential Goals</b>	<ul style="list-style-type: none"> <li>Review and solidify the representations (including verbal) of common fractions.</li> <li>Understand and represent equivalency as “filling” or “cutting” a fraction into smaller unit fraction pieces OR as making a fractional amount using “fewer” pieces.</li> <li>Connect work with equivalency language to division of fractions.</li> </ul>	
<b>Ongoing Ideas</b>	<ul style="list-style-type: none"> <li>Understand that you can use the relationship between units of measure to rewrite a known measurement in smaller or larger units.</li> <li>The meaning of the operations &amp; language used does not change when computing with common fractions and decimal fractions.</li> </ul>	
<b>Daily Math Warm-Ups (Number Talk Style)</b>	<ul style="list-style-type: none"> <li>Comparing common fractions (Remember to also read a fraction such as <math>\frac{3}{4}</math> as three one-fourth pieces). Review the 3 types of comparison problems: common numerator, common denominator, different numerator and denominator. Be sure that students can compare by relative position on a number line and understand relative size of the fractions. Foundation for M.5.12.</li> <li><a href="#">Red Think Tank Cards (Fractions/Division)</a></li> </ul>	
<b>Activity suggestions</b>	<ul style="list-style-type: none"> <li>If needed, complete Fraction Kit in <i>Creating Fraction &amp; Decimal AHAs</i>, pp. 10-55.</li> <li>See foundational experiences, <i>Creating Fraction &amp; Decimal AHAs</i>, pp. 16-25.</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Fraction Understanding Game</a></li> </ul>