

Core Content (Topics, Materials, Resources) Book – <i>Math Advantage</i> (Harcourt/Brace)	Performance Indicator	Enabling and Process/Thinking Skills	Technology/Integration	Products/Assessments
<i>August/September</i> <i>Numbers/Number Systems</i>				
NUMBER/NUMBER SENSE/OPERATIONS Number Systems <ul style="list-style-type: none"> <li>• Number recognition</li> <li>• Counting</li> <li>• Comparing positive and negative numbers</li> <li>• Meaning of operations</li> <li>• Properties</li> </ul>	I A 11 Compare numbers of less than zero to numbers above zero by recording temperatures for a region that go below zero; construct a number line using the recordings [NS.5.1.6; NS Benchmark: A; Math Processes: H, K, J] {6 OPT #3}  I B 14 Use the relationships among the four operations to estimate and solve multi-step problems; verify and interpret results with respect to the original problems (e.g., a bus trip involving several classrooms of students; number of buses needed, number of students/seat, admission fees, food, etc.) [NS.5.1.8, NS.5.1.13; NS Benchmark: F; Math Processes: K, J, H, J] {6 OPT #3, #13, #14, #19, #20}  I B 25 Utilize the commutative, associative and distributive, identity, and inverse properties to simplify and perform computations in problem-solving situations, including a written explanation of properties used and why [NS.5.1.7; NS Benchmark: F; Math Processes: A, B, H, J, K] {6 OPT #4, #5, #13, #14}  I B 27 Use order of operations to simplify numerical expressions including parentheses [NS.5.1.9; NS Benchmark: E; Math Processes: A, B, H, J, K] {6 OPT #3, #4, #5, #7, #8, #9, #13, #14}	[Enabling Skills] <ul style="list-style-type: none"> <li>• understanding the number line</li> <li>• positive and negative numbers</li> <li>• reading decimals and place value of both whole and decimals 10<sup>th</sup>, 100<sup>th</sup>, 1000<sup>th</sup></li> <li>• basic facts/four operations</li> <li>• key language in story problems</li> <li>• vocabulary terms</li> <li>• prime and composite numbers</li> <li>• rounding numbers</li> <li>• families (fact)</li> <li>• greater than, less than, equal (symbols)</li> <li>• inverse operations</li> <li>• Commutative, Associative, Distributive, Identity properties</li> <li>• decimal point placement when adding/subtracting decimal numbers</li> </ul> [Process Skills] <ul style="list-style-type: none"> <li>- Read and write large numbers</li> <li>- Read and write decimals</li> <li>- Compare and order numbers</li> <li>- Use operations (add, subtract, multiply, divide)</li> <li>- Round/estimate</li> <li>- Apply Commutative, Associative, Distributive, and Identity properties in problem-solving situations</li> </ul>		



December			
<p>NUMBER/NUMBER SENSE AND OPERATIONS</p> <p>Lesson 27.2, 27.3, 27.4</p> <p>Lesson 12.4, 19.1</p>	<p>I A 44 Write equivalent forms of fractions (<math>\frac{9}{12} \times \frac{2}{2} = \frac{18}{24}</math>; <math>\frac{3}{4} \times \frac{3}{3} = \frac{9}{12}</math>; etc.) to add and subtract common fractions; estimate, compute, and write an explanation of why common denominators are needed (e.g., pizzas/cakes cut into a large number of pieces; combining ingredients from various recipes for a shopping list) [NS.5.1.2, NS.5.1.12, NS.5.1.13; NS Benchmark: I; Math Processes: G, H, J, K] {6 OPT #3, #6, #7, #8, #9, #10, #19, #20}</p> <p>I A 43 Generate equivalent fractions, decimals, percents, and ratios to represent a part of a given group (e.g., the various colors of M&amp;M's found in one package: the bag of M&amp;M's contains 3 orange, 3 blue, 4 green, 4 yellow, 8 brown, and 2 red (24 total); the percent of green M&amp;M's is 17%; as a decimal, the repeating decimal is .1666...; as a fraction, 1/6; as a ratio 4:24 for part-to-whole (1:6), or as a ratio 1:1 for part-to-part (green to yellow) [NS.5.1.1, NS.5.1.3; NS Benchmarks: B, D; Math Processes: F, J, K] {6 OPT #5, #7, #8, #9, #10}</p> <p>I A 45 Round fractions to the nearest 0, <math>\frac{1}{2}</math>, or 1 to solve a problem (e.g., buying multiple items or dividing groups) [NS.5.1.4; NS Benchmark: B; Math Processes: J, K] {6 OPT #7, #8, #9, #10, #20}</p>	<p>[Enabling Skills]</p> <ul style="list-style-type: none"> <li>relationship among fractions, decimals, and percents</li> <li>factors</li> <li>multiplication facts</li> <li>division facts</li> <li>multiples</li> <li>picturing parts in mind and in drawings and whole</li> <li>comparing decimals, fractions, and percents</li> <li>&lt;, &gt;, =</li> <li>ordering fractions</li> <li>equivalent fractions</li> <li>finding common denominators</li> <li>simplest form</li> <li>rounding fractions to the nearest 0, <math>\frac{1}{2}</math>, or 1</li> </ul> <p>[Process Skills]</p> <ul style="list-style-type: none"> <li>Generate fractions, decimals, and percents to represent part of a group</li> <li>Add and subtract fractions with unlike denominators</li> <li>Make estimates when computing with fractions</li> <li>Solve real-life fraction problems</li> </ul>	

January															
<p>NUMBER/NUMBER SENSE AND OPERATIONS</p> <p>MEASUREMENT</p> <p>PATTERNS/FUNCTIONS/ALGEBRA</p> <p>Lesson 7.4, 7.5</p>	<p>I A 28 Devise addition and subtraction problems using shopping scenarios that include 1, 2, and 3-place decimals, fractions, and mixed numbers (e.g., prices per pound and quantities involving fractions, etc.; i.e., 1.5 lb., 3.25 doz., <math>\frac{1}{4}</math> bushel, .67 grams, .725mm, etc.) [NS.5.1.10; NS.5.1.11, NS.5.1.12, .5.1.13; NS Benchmark: H; Math Processes: D, H, J, K] {6 OPT #3, #5, #6, #19, #20}</p> <p>I A 46 Round decimals to hundredths or tenths to solve a problem (e.g., buying multiple-items or dividing groups) [NS.5.1.4; NS Benchmark: B; Math Processes: J, K] {6 OPT #7, #8, #9, #10}</p> <p>II B 34 Make conversions within the same measurement system while performing computations in a real-life situation (e.g., converting and doubling a recipe, determining area, buying material, comparing lengths, etc.) [M.5.2.5; M Benchmark: B; Math Processes: A, I] {6 OPT #17}</p> <p>IV A 14 Explain/demonstrate the general rule for a pattern or function by using physical materials, visual representations, words, tables, or graphs (e.g., what is the pattern that occurs?)</p> <table border="1" data-bbox="823 1451 1010 1643"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr> <td>1/5</td> <td>.2</td> </tr> <tr> <td>2/5</td> <td></td> </tr> <tr> <td></td> <td>.6</td> </tr> <tr> <td>4/5</td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table> <p>[A.5.4.1; A Benchmarks: A, B; Math Processes: B, E, I] {6 OPT #2, #3, #5}</p> <p>IV A 15 Use computers or calculators to develop patterns, and generalize from them using tables and graphs for real-life situations [A.5.4.2; A Benchmarks: A, B; Math Processes: B, E, I] {6 OPT #2, #3, #5}</p>	x	y	1/5	.2	2/5			.6	4/5				<p>[Enabling Skills]</p> <ul style="list-style-type: none"> <li>lining up decimal points</li> <li>rounding money to nearest dollar</li> <li>mixed fractions</li> <li>patterns repeating through calculators</li> <li>functions</li> <li>using calculators</li> <li>patterns on a ruler or meter stick</li> <li>conversions with a measurement system</li> </ul> <p>[Process Skills]</p> <ul style="list-style-type: none"> <li>Generalize patterns (numerical) to life/other situations</li> <li>Develop patterns that relate to a real experience</li> <li>Convert among various units in the metric system for length</li> <li>Convert among various units in the U.S. Customary system for length</li> <li>Convert among metric units for weight</li> <li>Convert among U.S. Customary units for weight</li> </ul>	
x	y														
1/5	.2														
2/5															
	.6														
4/5															

<b>February</b>				
NUMBER/NUMBER SENSE •			[Enabling Skills] • • [Process Skills] - -	
<b>March</b>				
NUMBER/NUMBER SENSE •			[Enabling Skills] • • [Process Skills] - -	
<b>April</b>				
NUMBERS/SENSE • Decimals/Fractions			[Enabling Skills] • • [Process Skills] - -	
<b>May</b>				
NUMBER/NUMBER SENSE • Number Systems			[Enabling Skills] • • [Process Skills] - -	
<b>June</b>				
NUMBER/NUMBER SENSE •			[Enabling Skills] • • [Process Skills] - -	

