

## 7<sup>th</sup> Grade Math Curriculum Bundle # 4

Title	Suggested Dates
Finish Integer Operations; Start Exponents, Square Roots, and Order of Operations	October 26 – November 13 (14 days)



Big Idea/Enduring Understanding	Guiding Questions
Integers are the numbers one can count with items such as apples or fingers, and their negatives as well as 0.	<ol style="list-style-type: none"> <li>1. How can you decide if the sum of two numbers is positive, negative or zero without actually calculating the sum or difference?</li> <li>2. How can any difference <math>a - b</math> of two numbers be restated as an equivalent addition statement?</li> <li>3. How would you decide whether the product of three numbers is positive or negative?</li> </ol>
Exponents represent repeated multiplication of the base number, not the base number multiplied by the exponent.	<ol style="list-style-type: none"> <li>1. How is <math>a^n</math> different from <math>a * n</math>?</li> </ol>
Square roots are the length of the side of a square.	<ol style="list-style-type: none"> <li>1. How can you estimate the square root of a number?</li> </ol>
The result of a series of operations is impacted by the order in which the operations are performed. There is a conventional order of operations that produces a standard outcome for a given expression.	<ol style="list-style-type: none"> <li>1. What is an example of an expression where the use of parentheses changes the result of a computation?</li> <li>2. Why do we need a conventional order of operations?</li> </ol>

The resources included here provide teaching examples and/or meaningful learning experiences to address the District Curriculum. In order to address the TEKS to the proper depth and complexity, teachers are encouraged to use resources to the degree that they are congruent with the TEKS and research-based best practices. Teaching using only the suggested resources does not guarantee student mastery of all standards. Teachers must use professional judgment to select among these and/or other resources to teach the district curriculum.

Knowledge & Skills with Student Expectations	District Specificity/Examples	Suggested Resources (See Note Above)	
<p><b>7.1 Number, operation, and quantitative reasoning. The student represents and uses numbers in a variety of equivalent forms.</b></p> <p>7.1A <b>compare and order integers</b> and positive rational numbers</p> <p><i>Note: Emphasis on integers</i></p>	<ul style="list-style-type: none"> <li>• find a number between two given numbers (could be multiple forms or like forms)</li> <li>• discuss ordering values in real life situations where “fastest time” would be the least value: racing times, golf, etc.</li> <li>• discuss other ordering possible</li> </ul>	<p><b>CMP2 Accentuate the Negative</b> Pearson Investigation 2, 3</p>	<p><b>PH Textbook</b> Chapter 1.6 through 1.8</p> <p><b>AIRR Grade 7</b> Activities #1-30</p> <p><b>Kamico 7<sup>th</sup> Grade</b> Match Point Activity pg 81</p>
<p><b>7.2 Number, operation, and quantitative reasoning. The student adds, subtracts, multiplies, or divides to solve problems and justify solutions.</b></p> <p>7.2C use models, such as concrete objects, pictorial models, and number lines, to add, subtract, multiply,</p>	<ul style="list-style-type: none"> <li>• number line - vertical and horizontal</li> <li>• two color counters</li> <li>• color tiles</li> <li>• positive and negative signs</li> <li>• applications such as altitude, temperature, profits/loss, deposits/withdraws</li> </ul>	<p><b>BrainPop.Com</b> Adding &amp; Subtracting Integers</p> <p><b>Understanding Math:</b> Understanding Integers: Topic 6, Topic 7, Topic 8</p>	

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<p>and divide integers and connect the actions to algorithms</p>			<p><b>AIRR Grade 7</b> Activities #82-97</p>
<p><b>7.2 Number, operation, and quantitative reasoning. The student adds, subtracts, multiplies, or divides to solve problems and justify solutions.</b></p> <p>7.2E simplify numerical expressions involving order of operations and exponents</p> <p>Note: Continued in Bundle 5</p>	<ul style="list-style-type: none"> <li>• use multiple symbols for all operations</li> <li>• use multiple symbols for “grouping symbols”</li> <li>• use integers</li> </ul>		<p><b>PH Textbook</b> Chapter 1.9</p> <p><b>AIRR Grade 7</b> Activities #103-107</p> <p><b>Kamico 7<sup>th</sup> Grade</b> 400 Meter Expression Act. Pg. 125</p> <p><b>TexTeams AR</b> Making Connections</p> <p><b>Understanding Math:</b> Understanding Integers: Topic 9</p>
<p><b>7.1 Number, operation, and quantitative reasoning. The student represents and uses numbers in a variety of equivalent forms.</b></p> <p>7.1C represent squares and square roots using geometric models</p> <p>Note:Continued in Bundle 5</p>	<ul style="list-style-type: none"> <li>• use positive whole numbers</li> <li>• convert between squares and square roots using pictorial representation (tested pictorially)</li> <li>• describe model (example: 10 rows of 10 squares)</li> <li>• show meaning of other exponents (example: <math>5^3 = 5*5*5</math>)</li> </ul>		<p><b>PH Textbook</b> Chapter 8.6</p> <p><b>Kamico 7<sup>th</sup> Grade</b> Scoot, Root, &amp; Square ‘Em Activity pg. 36</p> <p><b>AIRR Grade 7</b> Activities 45-51</p> <p><b>Understanding Math:</b> Understanding Exponents: Topic 5</p>
<p><b>7.14 Underlying processes and mathematical tools. The student communicates about Grade 7 mathematics through informal and mathematical language, representations, and models.</b></p> <p>7.14B evaluate the effectiveness of different representations to communicate ideas</p> <p>Note: Ongoing throughout bundles</p>	<p>Process skill to be addressed with relevant content</p>		