

**Mathematics**  
**Topics in Algebra and Geometry**  
**Unit 2: Properties of Real Numbers**

<b>Essential Understandings</b>	<ul style="list-style-type: none"> <li>Use of real numbers is a very important step in understanding algebra.</li> </ul>
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>What are the different types of real numbers?</li> <li>How do you graph real numbers?</li> <li>What is absolute value?</li> <li>How do you add, subtract, multiply and divide real numbers?</li> <li>What is the distributive property?</li> <li>How do you simplify expressions?</li> </ul>
<b>Essential Knowledge</b>	<ul style="list-style-type: none"> <li>There are many types of real numbers.</li> <li>All real numbers can be graphed on number lines.</li> <li>Absolute value is a number's distance from zero.</li> <li>Addition, subtraction, multiplication, and division of real numbers follow important rules.</li> </ul>
<b>Vocabulary</b>	<ul style="list-style-type: none"> <li><u>Terms:</u> <ul style="list-style-type: none"> <li>real numbers, number line, absolute value, distributive property</li> </ul> </li> </ul>
<b>Essential Skills</b>	<ul style="list-style-type: none"> <li>Identify real numbers.</li> <li>Graph real numbers on number lines.</li> <li>Find the absolute value.</li> <li>Add, subtract, multiply and divide real numbers</li> <li>Use the distributive property.</li> <li>Simplify expressions.</li> </ul>
<b>Related Maine Learning Results</b>	<p><u>Mathematics</u>  A. Number  Real Number  A1.Students will know how to represent and use real numbers.</p> <ol style="list-style-type: none"> <li>Use the concept of nth root.</li> <li>Estimate the value(s) of roots and use technology to approximate them.</li> <li>Compute using laws of exponents.</li> <li>Multiply and divide numbers expressed in scientific notation.</li> <li>Understand that some quadratic equations do not have real solutions and that there exist other number systems to allow for solutions to these equations.</li> </ol>
<b>Sample Lessons And Activities</b>	<ul style="list-style-type: none"> <li>Students will orally respond to questions.</li> <li>Students will utilize white boards to demonstrate individual understandings of concepts.</li> </ul>
<b>Sample Classroom Assessment Methods</b>	<ul style="list-style-type: none"> <li>Students will take an individual written assessment on the skills addressed by the essential questions.</li> <li>Students will complete homework assignments from the textbook.</li> </ul>

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<b>Sample Resources</b>	<ul style="list-style-type: none"><li>▪ <u>Publications:</u><ul style="list-style-type: none"><li>○ <u>Algebra 1 Textbook</u> (McDougal Littell)</li></ul></li></ul>
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