

**Mathematics**  
**Algebra 1: Academic**  
**Unit 7: Systems of Equations and Inequalities**

<b>Essential Understandings</b>	<ul style="list-style-type: none"> <li>▪ Solving systems of equations and inequalities is a very important Algebraic skill.</li> </ul>
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>▪ How do you solve systems by graphing?</li> <li>▪ How do you solve systems by substitution?</li> <li>▪ How do you solve systems by linear combinations?</li> <li>▪ How do you solve special types of linear systems?</li> <li>▪ How do you solve systems of inequalities?</li> </ul>
<b>Essential Knowledge</b>	<ul style="list-style-type: none"> <li>▪ Systems will be solved by graphing.</li> <li>▪ Systems will be solved using substitution.</li> <li>▪ Systems will be solved by linear combinations.</li> <li>▪ Special types of linear systems will be solved.</li> <li>▪ Systems of inequalities will be solved.</li> </ul>
<b>Vocabulary</b>	<ul style="list-style-type: none"> <li>▪ <u>Terms:</u> <ul style="list-style-type: none"> <li>○ systems of linear equations, solution of a linear system, point of intersection, graph-and-check method, substitution method, linear combination method, no solution systems, identity (infinitely many) solutions</li> </ul> </li> </ul>
<b>Essential Skills</b>	<ul style="list-style-type: none"> <li>▪ Solve systems by graphing.</li> <li>▪ Solve systems by substitution.</li> <li>▪ Solve systems by linear combinations.</li> <li>▪ Solve special types of linear systems.</li> <li>▪ Solve systems of inequalities.</li> </ul>
<b>Related Maine Learning Results</b>	<p><u>Mathematics</u>  D. Algebra  Symbols and Expressions  D1.Students understand and use polynomials and expressions with rational exponents.  a. Simplify expressions including those with rational numbers.  Equations and Inequalities  D2.Students solve families of equations and inequalities.  a. Solve systems of linear equations and inequalities in two unknowns and interpret their graphs.  f. Explain why the coordinates of the point of intersection of the lines represented by a system of equations is its solution and apply this understanding to solving problems.</p>
<b>Sample Lessons And Activities</b>	<ul style="list-style-type: none"> <li>▪ Students will orally respond to questions.</li> <li>▪ Students will utilize worksheets and in their notes to demonstrate individual understanding of the concepts.</li> </ul>
<b>Sample Classroom Assessment</b>	<ul style="list-style-type: none"> <li>▪ Quizzes</li> <li>▪ Take-home worksheets</li> <li>▪ Tests</li> </ul>

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<b>Methods</b>	
<b>Sample Resources</b>	<ul style="list-style-type: none"><li>▪ <u>Publications:</u><ul style="list-style-type: none"><li>○ <u>Algebra</u> -Foerster</li></ul></li></ul>