## **Advanced Mathematics 2200**

## Unit 9: Linear and Quadratic Inequalities

## Text: Pre – Calculus 11

## Chapter 9

By the end of the unit, it is expected that students will:

<ul> <li>solution region that satisfies a linear inequality.</li> <li>pp. 464-4</li> <li>Explain, using examples, when a solid or broken line should be used in the solution for a linear inequality.</li> <li>Sketch, with or without technology, the graph of a linear inequality.</li> <li>Solve a problem that involves a linear inequality.</li> <li>Determine the solution of a quadratic inequality in one variable, using strategies such as case analysis, graphing, roots and test points, or sign analysis; and explain the strategy used.</li> <li>Represent and solve a problem that involves a quadratic inequality in one variable.</li> <li>Interpret the solution to a problem that involves a quadratic inequality in one variable.</li> <li>Explain, using examples, how test points can be used to determine the Section 9</li> </ul>		Outcomes	Text Book
<ul> <li>solution for a linear inequality.</li> <li>3. Sketch, with or without technology, the graph of a linear inequality.</li> <li>4. Solve a problem that involves a linear inequality.</li> <li>5. Determine the solution of a quadratic inequality in one variable, using strategies such as case analysis, graphing, roots and test points, or sign analysis; and explain the strategy used.</li> <li>6. Represent and solve a problem that involves a quadratic inequality in one variable.</li> <li>7. Interpret the solution to a problem that involves a quadratic inequality in one variable.</li> <li>8. Explain, using examples, how test points can be used to determine the solution region that satisfies a quadratic inequality.</li> <li>9. Explain, using examples, when a solid or broken line should be used in the solution for a quadratic inequality.</li> </ul>	1.		Section 9.1 pp. 464-475
<ul> <li>4. Solve a problem that involves a linear inequality.</li> <li>5. Determine the solution of a quadratic inequality in one variable, using strategies such as case analysis, graphing, roots and test points, or sign analysis; and explain the strategy used.</li> <li>6. Represent and solve a problem that involves a quadratic inequality in one variable.</li> <li>7. Interpret the solution to a problem that involves a quadratic inequality in one variable</li> <li>8. Explain, using examples, how test points can be used to determine the solution region that satisfies a quadratic inequality.</li> <li>9. Explain, using examples, when a solid or broken line should be used in the solution for a quadratic inequality.</li> </ul>	2.		
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solution for a quadratic inequality.	8.		Section 9.3 pp. 488-500
10. Sketch, with or without technology, the graph of a quadratic inequality.	9.		
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11. Solve a problem that involves a quadratic inequality.	11.	Solve a problem that involves a quadratic inequality.	