

# Lesson Plan: Programming the Quadratic Equation in a Graphing Calculator (TI-94)

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Concept:	Students will write a program to find the solutions to the Quadratic equation on a graphing calculator (TI-94).
Class level:	Algebra I & II
Time:	45 minutes
Activity:	Each students will be given a handout with instructions for programming the Quadratic equation. The students will follow the steps and enter the commands line by line. When finished they will test the program with few various problems.
Questions:	<p>These are anticipatory questions to ask the class before getting started, (possibly the day before).</p> <ul style="list-style-type: none"><li>• Can you think of any other programs you would like your calculator to have?</li><li>• Do you recognize the Quadratic equation in the program?</li><li>• How can have the program find imaginary solutions?</li></ul>
State Standards:	<p>Minnesota State 9.2.2.3</p> <p>Minnesota State 9.2.4.1</p>
Materials:	<p>You will need the following for each student:</p> <ul style="list-style-type: none"><li>• Graphing Calculator (TI-94)</li><li>• Handout</li></ul>
It would be helpful for the teacher to have:	<ul style="list-style-type: none"><li>• Overhead projector</li><li>• (device to project screen of graphing calculator)</li></ul>
Prerequisite skills:	The students should have knowledge about graphing and be able to graph by hand. This provides the students with comprehension of what they see on their own screens. They are able to hypothesis what they should get.
Key Questions:	<p>These questions are to be asked through the lesson to prompt student thoughts.</p> <ul style="list-style-type: none"><li>• How many commands did you figure out?</li><li>• Is it easier or more difficult than you thought?</li><li>• Which lines contain the expressions for the Quadratic equation?</li><li>• What results do you expect the calculator to give?</li><li>• Once programmed, is the calculator displaying the solutions you expected?</li><li>• What more would you like to use the calculator for?</li></ul>