**Unit 8.2 Plan - More Quadratic Functions**

In this unit, you will find ways to generate each representation of a quadratic function (rule, graph, table, and situation) from each of the others. You will also develop a method to find the *x*-intercepts of a parabola using the Zero Product Property. Then you will see another way to write the equation of a parabola, called graphing form, and use square roots to find the *x*-intercepts. You will also “complete the square” to change between standard form and graphing form of a quadratic function. Finally, you will solve quadratic equations using the Quadratic Formula.

**Day One** - Multiple Representations for Quadratic Functions

Objective: Students will identify connections between different representations of quadratics: an equation, a table, a situation, and a graph. Students will also connect the intercepts and vertex of a parabola to a situation.

Agenda:

* Review 8.1 Test
* Problems [8-55](http://textbooks.cpm.org/bookdb.php?title=cca&name=8.2.1&type=lesson#8-55) and [8-56](http://textbooks.cpm.org/bookdb.php?title=cca&name=8.2.1&type=lesson#8-56) (the water balloon contest)

Homework:

* 8-58, 60, 61, 62

**Day Two -** Zero Product Property

Objective: Students will learn that they can sketch the graph of a quadratic rule quickly, using its intercepts. Students will also learn how to find the *x‑*intercepts of a parabola by factoring the corresponding quadratic equation and applying the **Zero Product Property**.

Agenda:

* Homework Review
* Problem 8-64 through 8-68

Homework:

* 8-69, 71, 73, 74

**Day Three -** Completing the Quadratic Web

Objective: Students will practice moving from a table, graph, or situation, to a quadratic rule.

Agenda:

* Homework Review
* Mini Quiz
* Team Problems 8-89 thru 8-90

Homework:

* 8-83, 84, 87, 88, 92, 93

**Day Four -** Team Test

Objective: Successful team test. Students will also review what they have learned about quadratic functions thus far.

Agenda:

* Homework Review
* Team Test
* Handouts: Review Factoring

Homework: 8-94, 96, 107, 109

**Day Five -** Rule → Graph

Objective: Students will learn how to sketch the graph of a quadratic from the rule.

Agenda:

* Homework Review
* Handouts: Rule → Graph
* Team Problems 8-77, 8-78

Homework: 8-112, 114, 116, 119

## Day Six - What if it’s not factorable? The Quadratic Formula

Objective: Students will learn how to use the **Quadratic Formula** to solve quadratic equations.

Agenda:

* Review Homework
* Miniquiz #2
* 9.1.1 9-1, 9-2
* 9.1.2 9-13, 14, 15, 16

Homework:

* 9-17, 18, 19, 20

**Day Seven -** What if the equation is not in standard form?

Objective: Students will continue to solve quadratic equations, including some that are not in standard form, and some that have only one solution or no real solutions.

Agenda:

* Review Homework
* 9.1.3 9-24, 25, 26
* 9.1.4 9-34

Homework: 9-27, 29, 31, 38

**Day Eight -** Pulling it all together

Objective: Students will solidify understanding of Quadratic functions and prepare for unit test.

Agenda:

* Review Homework
* Review for Test

Homework: Complete Review Problems

**Day Nine -** Unit Test

Objective: Successful Quadratic Assessment

Agenda:

* Process Homework
* Individual Unit Test
* Begin Final Exam Review

Homework:

* Work on Final Exam Review

**Day Ten & Eleven -** Review for Final Exam

Do you know when your Final Exam is?