

Algebra II Curriculum Map
2013-2014

**Focus Topic 3 – Solving Quadratic Equations and Inequalities
(2 Weeks)**

E.1.a – Solve quadratic equations and inequalities using various techniques, including completing the square and using the quadratic formula.

Learning Target(s):

- I can solve quadratic equations and inequalities using the quadratic formula.
- I can solve quadratic equations and inequalities using completing the square.
- I can solve quadratic equations and inequalities using factoring.

E.1.b – Use the discriminant to determine the number and type of roots for a given quadratic equation.

Learning Target(s):

- I can use the discriminant to determine the number and type of roots for a given quadratic equation.

E.1.c – Solve quadratic equations with complex number solutions.

Learning Target(s):

- I can solve quadratic equations with complex number solutions.

E.1.d – Solve quadratic systems graphically and algebraically with and without technology.

Learning Target(s):

- I can solve quadratic systems graphically with and without technology.
- I can solve quadratic systems algebraically with and without technology.

Vocabulary: quadratic equation, quadratic inequality, completing the square, quadratic formula, discriminant, roots, solutions, zeros, x-intercepts, complex number

Instructional Resources:

- Formative Assessment Lessons for Mathematics: <http://map.mathshell.org/materials/lessons.php>
- Formative Assessment Tasks for Mathematics: <http://map.mathshell.org/materials/tasks.php>
- Illustrative Mathematics: <http://www.illustrativemathematics.org/standards/k8>
- NCTM Illuminations: <http://illuminations.nctm.org/>
- PARCC: <http://www.parcconline.org/mcf/mathematics/parcc-model-content-frameworks-browser>
- Inside Mathematics: <http://insidemathematics.org/index.php/mathematical-content-standards>
- New York State: <http://www.engageny.org/mathematics>
- Lessons from *Algebra 2 Connections*: 4.3.1 – 4.3.2 (E.1.a, E.1.b)
- Lessons from *Algebra 2 Connections*: 9.2.1 (E.1.c)
- Lessons from *Algebra 2 Connections*: 5.1.2 – 5.1.4 (E.1.d)

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- Checkpoints from *Algebra 2 Connections*: Number 5, Number 7, Number 14 (E.1.a)

Assessment Notes:

- The Focus Topic will have 3 multiple choice questions and 1 extended response on the proficiency assessment.