

Algebra II Curriculum Map  
2013-2014

**Focus Topic 1 – Radical Expressions and Equations**  
**(3 Weeks)**

**G.1.b** – Simplify radicals that have various indices.

**Learning Target(s):**

- I can simplify radical expressions with various indices.

**G.1.c** – Use properties of roots and rational exponents to evaluate and simplify expressions.

**Learning Target(s):**

- I can evaluate and simplify expressions by using the properties of roots and rational exponents.

**G.1.d** – Add, subtract, multiply, and divide expressions containing radicals.

**Learning Target(s):**

- I can add expressions containing radicals.
- I can subtract expressions containing radicals.
- I can multiply expressions containing radicals.
- I can divide expressions containing radicals.

**G.1.e** – Rationalize denominators containing radicals and find the simplest common denominator.

**Learning Target(s):**

- I can rationalize denominators containing radicals.
- I can find the simplest common denominator of expressions involving radicals.

**G.1.f** – Evaluate expressions and solve equations containing  $n$ th roots or rational exponents.

**Learning Target(s):**

- I can evaluate expressions and solve equations containing  $n$ th roots.
- I can evaluate expressions and solve equations containing rational exponents.

**G.1.g** – Evaluate and solve radical equations given a formula for a real-world situation.

**Learning Target(s):**

- I can evaluate and solve radical equations given a formula for a real-world situation.

**G.1.a (Supporting Standard)** – Solve mathematical and real-world rational equation problems (e.g., work or rate problems)

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### Learning Target(s):

- I can solve mathematical and real-world rational equation problems.

### **Foundation Topic: Solving multi-step linear equations and inequalities (A.1.d)**

**A.1.d** – Solve single-step and multistep equations and inequalities in one variable.

### Learning Target(s):

- I can solve single-step and multi-step equations in one variable.
- I can solve single-step and multi-step inequalities in one variable.

**Vocabulary:** equation, inequality, radical, index, rational exponent, rationalize, nth root

### Instructional Notes:

- Supporting standards do not have to be directly incorporated into instruction for all students, but for students that have mastered the focus and foundational standards, supporting standards should be incorporated.
- For students in Advanced or Honors courses, supporting standards are to be incorporated into instruction within the time frame allowed for the Focus Topic.

### 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*: 3.2.1 – 3.2.2 (G.1.b, G.1.c)
- Lessons from *Algebra 2 Connections*: 5.1.1 – 5.1.2 (G.1.d, G.1.e, G.1.f, G.1.g)
- Checkpoint from *Algebra 2 Connections*: Number 4, Number 11 (G.1.c)
- Checkpoint from *Algebra 2 Connections*: Number 13 (G.1.a)

### Assessment Notes:

- The Focus Topic will have 3 multiple choice questions on the proficiency assessment.
- The Foundation Topic will have 3 multiple choice questions on the proficiency assessment.
- Foundational standards should be formatively assessed early in the cycle to identify foundational gaps of students.
- Supporting standards will not be directly assessed on proficiency assessments.