

Mathematics
Algebra 1: Part 2
Unit 7: Radicals and Geometry (If time permits)

Essential Understandings	<ul style="list-style-type: none"> ▪ Understanding radicals and geometry is an important skill of future success in mathematics.
Essential Questions	<ul style="list-style-type: none"> ▪ How do you evaluate radicals (square roots, cube roots, etc.)? ▪ How do you simplify radicals? ▪ How do you add, subtract, multiply, and divide radicals? ▪ How do you solve radical equations? ▪ How do you use the Pythagorean Theorem?
Essential Knowledge	<ul style="list-style-type: none"> ▪ Square roots can be simplified. ▪ Radicals can be added, subtracted, multiplied, and divided. ▪ Radical equations can be solved.
Vocabulary	<ul style="list-style-type: none"> ▪ <u>Terms:</u> <ul style="list-style-type: none"> ○ radicals, radical equations, Pythagorean Theorem, hypotenuse, legs of a right triangle
Essential Skills	<ul style="list-style-type: none"> ▪ Evaluate square roots. ▪ Simplify radicals ▪ Add, subtract, multiply, and divide radicals. ▪ Solve radical equations. ▪ Use the Pythagorean Theorem.
Related Maine Learning Results	<p><u>Mathematics</u></p> <p>A. Number Real Number A1.Students will know how to represent and use real numbers.</p> <ol style="list-style-type: none"> a. Use the concept of nth root. b. Estimate the value(s) of roots and use technology to approximate them. c. Compute using laws of exponents. d. Multiply and divide numbers expressed in scientific notation. <p>C. Geometry Geometric Figures C1.Students justify statements about polygons and solve problems.</p> <ol style="list-style-type: none"> b. Solve for missing dimensions based on congruence and similarity. c. Use the Pythagorean Theorem in situations where right triangles are created by adding segments to figures. d. Use the distance formula.
Sample Lessons And Activities	<ul style="list-style-type: none"> ▪ Students will orally respond to questions. ▪ Students will utilize worksheets and their notes to demonstrate individual understanding of the concepts.

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Sample Classroom Assessment Methods	<ul style="list-style-type: none">▪ Quizzes▪ Take-home worksheets▪ Tests
Sample Resources	<ul style="list-style-type: none">▪ <u>Publications:</u><ul style="list-style-type: none">○ <u>Algebra 1 Concepts and Skills</u> - McDougal - Littell