Mathematics
Algebra 1: CP
Unit 12: Radicals and Geometry

Essential Understandings	▪ Understanding radicals and geometry is an important skill of future success in mathematics.
Essential Questions	▪ How do you evaluate square roots? ▪ How do you add, subtract, multiply, and divide radicals? ▪ How do you solve radical equations? ▪ How do you use the Pythagorean Theorem? ▪ How do you use the distance formula? ▪ How do you use the midpoint formula?
Essential Knowledge	▪ Square roots can be simplified. ▪ Radicals can be added, subtracted, multiplied, and divided. ▪ Radical equations can be solved.
Vocabulary	▪ <u>Terms</u>: ○ Pythagorean Theorem, hypotenuse, legs of a right triangle, distance formula, midpoint, midpoint formula.
Essential Skills	▪ Evaluate square roots. ▪ Add, subtract, multiply, and divide radicals. ▪ Solve radical equations. ▪ Use the Pythagorean Theorem. ▪ Use the distance formula. ▪ Use the midpoint formula.

Related Maine Learning Results	<u>Mathematics</u>
	A. Number
	  Real Number
	  A1.Students will know how to represent and use real numbers.
	    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.
	    e. Understand that some quadratic equations do not have real solutions and that there exist other number systems to allow for solutions to these equations.
	C. Geometry
	  Geometric Measurement
	  C4.Students find the surface area and volume of three-dimensional objects.
	    a. Find the volume and surface area of three-dimensional figures including cones and spheres.
	    Determine the effect of changes in linear dimensions on the volume and surface areas of similar and other three-dimensional figures.

Mathematics
Algebra 1: CP
Unit 12: Radicals and Geometry

Sample Lessons And Activities	▪ Students will orally respond to questions. ▪ Students will utilize worksheets and in their notes to demonstrate individual understanding of the concepts.
Sample Classroom Assessment Methods	▪ Evaluate homework ▪ Quizzes ▪ Chapter test
Sample Resources	▪ <u>Publications:</u> o <u>Algebra 1</u> - McDougall Littell