Algebra I Honors
Unit 8: Laws of Exponents

Essential Understandings	▪ The laws of exponents are very important to future mathematical work.
Essential Questions	▪ What are the multiplication laws of exponents? ▪ How do I evaluate powers with negative exponents? ▪ How do I evaluate powers with zero as their exponent? ▪ What are the division laws of exponents? ▪ How do I evaluate powers with fractions as their exponent?
Essential Knowledge	▪ There are many multiplication laws of exponents. ▪ There are rules for negative exponents. ▪ There are rules for zero as an exponent. ▪ There are many division laws of exponents ▪ There are rules for fractions as exponents. ▪ Exponential growth functions will be graphed. ▪ Exponential decay functions will be graphed.
Vocabulary	▪ Terms: o Power, base, exponent, product of powers property, power of a power property, power of a product property, zero exponents, negative exponents, quotient of a powers property, power of a quotient property, fractional exponents. o Exponential growth functions, exponential decay functions.
Essential Skills	▪ Use the multiplication laws of exponents. ▪ Evaluate powers with negative exponents. ▪ Evaluate powers with zero as their exponent ▪ Use the division laws of exponents. ▪ Evaluate powers with fractions as their exponent. ▪ Graph and interpret exponential growth and exponential decay functions using technology.
Related Maine Learning Results	A. Real Numbers 1c D. Symbols and Expressions 1a
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	▪ Quizzes, take-home worksheets, and tests.
Sample Resources	▪ Publications: o Algebra 1 Textbook (Larson) ▪ Other: o Graphing calculators.
Technology Link	▪ http://www.brunswick.k12.me.us/curriculum