

Algebra I Honors

Unit 8: Laws of Exponents

Essential Understandings	<ul style="list-style-type: none"> ▪ The laws of exponents are very important to future mathematical work.
Essential Questions	<ul style="list-style-type: none"> ▪ 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	<ul style="list-style-type: none"> ▪ 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	<ul style="list-style-type: none"> ▪ <u>Terms:</u> <ul style="list-style-type: none"> ○ 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. ○ Exponential growth functions, exponential decay functions.
Essential Skills	<ul style="list-style-type: none"> ▪ 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	<ul style="list-style-type: none"> ▪ 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	<ul style="list-style-type: none"> ▪ Quizzes, take-home worksheets, and tests.
Sample Resources	<ul style="list-style-type: none"> ▪ <u>Publications:</u> <ul style="list-style-type: none"> ○ Algebra 1 Textbook (Larson) ▪ <u>Other:</u> <ul style="list-style-type: none"> ○ Graphing calculators.
Technology Link	<ul style="list-style-type: none"> ▪ http://www.brunswick.k12.me.us/curriculum