

Standards

Printer Friendly Version

- Subject Area

[CC.2: Mathematics](#)

- Standard Area

[CC.2.2: Algebraic Concepts](#)

- Grade Level

[CC.2.2.HS: GRADE High School](#)

- Standard

[CC.2.2.HS.D.1: Interpret the structure of expressions to represent a quantity in terms of its context.](#)

- Assessment Anchor

[A1.1.1:](#)

[Operations with Real Numbers and Expressions](#)

- Anchor Descriptor

[A1.1.1.1: Represent and/or use numbers in equivalent forms \(e.g., integers, fractions, decimals, percents, square roots, and exponents\).](#)

- Eligible Content

[A1.1.1.1.1: Compare and/or order any real numbers \(rational and irrational may be mixed\).](#)

- Eligible Content

[A1.1.1.1.2:](#)

[Simplify square roots \(e.g., \$\sqrt{24} = 2\sqrt{6}\$ \).](#)

- Anchor Descriptor

[A1.1.1.2: Apply number theory concepts to show relationships between real numbers in problem solving settings.](#)

- Eligible Content

[A1.1.1.2.1: Find the Greatest Common Factor \(GCF\) and/or the Least Common Multiple \(LCM\) for sets of monomials.](#)

- Anchor Descriptor

[A1.1.1.3: Use exponents, roots and/or absolute value to solve problems.](#)

- Eligible Content

[A1.1.1.3.1: Simplify/evaluate expressions involving properties/laws of exponents, roots and/or absolute value to solve problems \(exponents should be integers from -10 to 10\).](#)

- Anchor Descriptor

[A1.1.1.4: Use estimation strategies in problem-solving situations.](#)

- Eligible Content

[A1.1.1.4.1: Use estimation to solve problems.](#)

- Anchor Descriptor

[A1.1.1.5: Simplify expressions involving polynomials.](#)

- **Eligible Content**

A1.1.1.5.1: Add, subtract and/or multiply polynomial expressions (express answers in simplest form – nothing larger than a binomial multiplied by a trinomial).

- **Eligible Content**

A1.1.1.5.2:

Factor algebraic expressions, including difference of squares and trinomials (trinomials limited to the form ax^2+bx+c where a is equal to 1 after factoring out all monomial factors).

- **Eligible Content**

A1.1.1.5.3: Simplify/reduce a rational algebraic expression.

- **Assessment Anchor**

A2.1.2:

Non-Linear Expressions

- **Anchor Descriptor**

A2.1.2.1: Use exponents, roots and/or absolute values to represent equivalent forms or to solve problems.

- **Eligible Content**

A2.1.2.1.1: Use exponential expressions to represent rational numbers.

- **Eligible Content**

A2.1.2.1.2: Simplify/evaluate expressions involving positive and negative exponents and/or roots (may contain all types of real numbers - exponents should not exceed power of 10).

- **Eligible Content**

A2.1.2.1.3:

Simplify/evaluate expressions involving multiplying with exponents (e.g. $x^6 * x^7 = x^{13}$), powers of powers (e.g., $(x^6)^7 = x^{42}$) and powers of products $(2x^2)^3 = 8x^6$ (limit to rational exponents).

- **Eligible Content**

A2.1.2.1.4:

Simplify or evaluate expressions involving logarithms and exponents (e.g. $\log_2 8 = 3$ or $\log_4 2 = \frac{1}{2}$).

- **Anchor Descriptor**

A2.1.2.2: Simplify expressions involving polynomials.

- **Eligible Content**

A2.1.2.2.1:

Factor algebraic expressions, including difference of squares and trinomials (trinomials limited to the form ax^2+bx+c where a is not equal to 0).

- **Eligible Content**

A2.1.2.2.2: Simplify rational algebraic expressions.

- **Alternate Eligible Content**

CC.2.2.HS.D.1.a: Select an algebraic expression using any of the four operations and solve a real-world problem.

Alternate Eligible Content is designed for students assessed using the PA Alternate System of Assessment (PASA). Essentialized Example resources assist teachers in designing instruction that reduces content complexity while maintaining alignment to academic standards.