

## Polynomials

Students who study polynomials are learning to answer the questions

*How can complex calculations be modeled in a general way?*

*How are operations on polynomials like operations on fractions?*

*Why would it be advantageous to factor a polynomial?*

This unit of study addresses Indiana College & Career Ready Standards as follows:

**AI.RNE.6:** Factor common terms from polynomials and factor polynomials completely. Factor the difference of two squares, perfect square trinomials, and other quadratic expressions.

**AI.RNE.7:** Understand polynomials are closed under the operations of addition, subtraction, and multiplication with integers; add, subtract, and multiply polynomials and divide polynomials by monomials.

Gaining skills in this unit will enable students to do everyday tasks like ordering bulk supplies, formatting a spreadsheet, or calculating shipping costs. The specific skills in this unit of study include

- identifying characteristics of polynomials
- simplifying polynomials
- adding polynomials
- subtracting polynomials
- multiplying polynomials by monomials
- multiplying binomials
- identifying special products of polynomials
- factoring special products
- factoring simple trinomials
- factoring other trinomials
- factoring by grouping