

Simplify algebraic expressions

Terms

Before we practice simplifying expressions, some new language of algebra is presented. A term is a number or the product of a number and variables raised to powers.

Like terms

To simplify an algebraic expression, you need to combine the like terms. Like terms have the same variables with the same exponents. If two terms are like terms, then only their coefficients may differ. Once you find all of the like terms, you can combine them by adding or subtracting the coefficients only.

An algebraic expression containing the sum or difference of like terms can be simplified by applying the distributive property. For example, by the distributive property, we rewrite the sum of the like terms $3x + 2x$ as $(3 + 2)x = 5x$.

Simplifying expressions makes frequent use of the distributive property to also remove parentheses. When simplifying an expression containing parentheses, we often use the distributive property in both directions - first to remove parentheses and then again to combine any like terms.

Monomial

When multiplying monomials you multiply the coefficients and add the exponents of the same variables. When dividing monomial (one term) you divide the coefficients and subtract the exponents of the same variables.