

## The Algebra Progression in *MathLinks*: Grade 6

The Expressions and Equations standards are the focus of four units in *MathLinks*: Grade 6.

- In Unit 6 (this unit), **Expressions**, students work with both numerical and algebraic expressions. They learn to manipulate, simplify, and evaluate expressions using the distributive property and the conventions for order of operations. They also translate between words, numbers, and symbols.
- In Unit 7, **Inputs and Outputs**, students use visuals and contexts to analyze and solve problems with multiple representations. Concepts related to proportional reasoning are reviewed and emphasized. Students' knowledge of expressions enables them to generate equations for relationships relating two variables, called "input-output rules."

Without explicitly defining "function" (this is done in grade 8), students begin to develop flexibility when working with variables, expressions, and equations. The problems introduced set the stage for solving a linear equation in one variable since these equations are of the form  $x + p = q$  and  $px = q$  (i.e., "one-step" equations") for cases in which  $p$  and  $q$  are nonnegative rational numbers.

- In Unit 8, **Solving Equations**, students learn mental math and substitution strategies and formalize the equation-solving processes, using balance and tape diagrams to work toward traditional equation-solving procedures, as the need grows.
- In Unit 10, **The Number Lines and the Coordinate Plane**, students graph solutions to simple inequalities.