Unit 3 Key Concepts and Vocabulary

Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.

Key Vocabulary

Coefficient - The number that is multiplied by the variable in an algebraic expression.

Rational number - Any number that can be expressed as a ratio of two integers

Algebraic expression - An expression that contains at least one variable. (Lesson 6.1)

Equation - A mathematical sentence that shows that two expressions are equivalent.

Solution - The value for the variable that makes the equation true.

Distributive Property - You can use the Distributive Property to remove the parentheses from an algebraic expression like $3(x + 5)$. Sometimes this is called "simplifying" or "expanding" the expression. Multiply the quantity in front of parentheses by each term within parentheses: $3(x + 5) = 3 \cdot x + 3 \cdot 5 = 3x + 15$.

Factor - To factor is to write a number or an algebraic expression as a product.

Operation - Addition Subtraction Multiplication and Division

Inverse Operation – Opposite operation

Two-Step Equation - An equation with more than one operation. (Lesson 6.3)

Negative Variable - A variable whose value is less than zero. (Lesson 6.3)

Positive Variable - A variable whose value is greater than zero. (Lesson 6.3)

Inequality - A mathematical sentence that shows the relationship between quantities that are not equivalent. (Lesson 7.1)

The distinction between an algebraic expression and an equation is that an equation contains an equal sign while an expression does not. Only an equation can have a solution, although some expressions can be simplified.

You can solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$, where p, q, and r are specific rational numbers. Solve equations of these forms fluently.

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