

# Math 6+: Algebraic Concepts

## Equations and Inequalities

### Inequalities

#### Students

#### Learning Continuum Statements:

#### Students:

##### RIT 211-220:

- Determines whether a linear equation or inequality is true for a given value of the variable

#### Students:

##### RIT 221-230:

- Determines whether a linear equation or inequality is true for a given value of the variable
- Identifies an ordered pair that is a solution to a two-variable linear inequality
- Solves one-step linear inequalities with positive rational numbers
- Writes a multi-step linear inequality in one variable to represent a real-world or mathematical context
- Writes a one-step linear inequality in one variable to represent a real-world or mathematical context
- Writes a two-step linear inequality in one variable to represent a real-world or mathematical context

#### Students:

##### RIT 231-240:

- Determines whether a linear equation or inequality is true for a given value of the variable
- Identifies an ordered pair that is a solution to a two-variable linear inequality
- Represents the solutions of a two-variable absolute value inequality on the coordinate plane
- Solves one-step linear inequalities with negative rational numbers
- Solves two-step linear inequalities
- Writes a compound inequality to represent a real-world or mathematical context
- Writes a linear inequality in two variables to represent a real-world or mathematical context
- Writes a linear inequality to represent a region on the coordinate plane
- Writes a multi-step linear inequality in one variable to represent a real-world or mathematical context
- Writes a one-step linear inequality in one variable to represent a real-world or mathematical context
- Writes a quadratic inequality in one variable to represent a real-world or mathematical context
- Writes a two-step linear inequality in one variable to represent a real-world or mathematical context
- Writes an inequality in the form  $x > c$  or  $x < c$  to represent a real-world or mathematical context
- Writes and solves a one-step linear inequality in one variable involving a real-world or mathematical context

**Students:****RIT 241-250:**

- Determines whether an absolute value equation or inequality is true for a given value of the variable
- Identifies an ordered pair that is a solution to a two-variable linear inequality
- Represents an inequality in the form  $x > c$  or  $x < c$  on a number line given a real-world or mathematical context
- Represents the solutions of a compound linear inequality on a number line
- Represents the solutions of a one-step linear inequality on a number line
- Represents the solutions of a two-step linear inequality on a number line
- Represents the solutions of an absolute value inequality on a number line
- Solves multi-step linear inequalities
- Solves one-step linear inequalities with negative rational numbers
- Solves two-step linear inequalities
- Writes a compound inequality to represent a real-world or mathematical context
- Writes a compound inequality to represent a set of real numbers shown on a number line
- Writes a multi-step linear inequality in one variable to represent a real-world or mathematical context
- Writes a multi-step rational inequality in one variable to represent a real-world or mathematical context
- Writes a one-step linear inequality in one variable to represent a real-world or mathematical context
- Writes a two-step linear inequality in one variable to represent a real-world or mathematical context
- Writes an inequality in the form  $x > c$  or  $x < c$  to represent a real-world or mathematical context
- Writes an inequality in the form  $x > c$  or  $x < c$  to represent a set of real numbers shown on a number line
- Writes and solves a one-step linear inequality in one variable involving a real-world or mathematical context

**Students:****RIT 251-260:**

- Determines whether an absolute value equation or inequality is true for a given value of the variable
- Represents a compound inequality on a number line given a real-world or mathematical context
- Represents the solutions of a multistep linear inequality on a number line
- Represents the solutions of a two-step linear inequality on a number line
- Represents the solutions of a two-variable linear inequality on the coordinate plane
- Represents the solutions of an absolute value inequality on a number line
- Solves absolute value inequalities
- Solves compound linear inequalities
- Solves multi-step linear inequalities
- Solves one-step linear inequalities with negative rational numbers
- Solves two-step linear inequalities
- Writes a compound inequality to represent a real-world or mathematical context
- Writes a compound inequality to represent a set of real numbers shown on a number line
- Writes an inequality in the form  $x > c$  or  $x < c$  to represent a set of real numbers shown on a number line

**Students:****RIT 261-270:**

- Represents the solutions of a multistep linear inequality on a number line
- Represents the solutions of a two-variable linear inequality on the coordinate plane
- Represents the solutions of a two-variable quadratic inequality on the coordinate plane
- Represents the solutions of an absolute value inequality on a number line
- Solves absolute value inequalities
- Solves compound linear inequalities
- Solves multi-step linear inequalities
- Solves quadratic inequalities
- Writes an absolute value inequality to represent a real-world or mathematical context
- Writes an exponential inequality in one variable to represent a real-world or mathematical context

**Students:****RIT 271-280:**

- Represents the solutions of a quadratic inequality on a number line
- Represents the solutions of an absolute value inequality on a number line
- Solves absolute value inequalities
- Writes an absolute value inequality to represent a real-world or mathematical context
- Writes an absolute value inequality to represent a set of real numbers shown on a number line