

Algebra 1 - Unit 4: Math - Systems

Content Area: **Mathematics**
Course(s): **Math 6, Generic Course**
Time Period: **Generic Time Period**
Length: **#18 days**
Status: **Published**

Established Goals/Standards

Please choose the appropriate Goals/Standards from the Standards tab above.

MA.A-CED.A.2	Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.
MA.A-REI.C.5	Prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions.
MA.A-REI.C.6	Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.
MA.A-REI.D.11	Explain why the x -coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.
MA.A-REI.D.12	Graph the solutions to a linear inequality in two variables as a half plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.

Essential Questions

Please add your Essential Questions by clicking on the Lists tab above.

- How can real world situations be modeled by systems.
- How can solutions be found to a system?

Enduring Understanding

Please add your Enduring Understandings by clicking on the Lists tab above.

- Solutions can be found by using different methods (graph, substitution, elimination)
- Systems written with two variables mirror real life situations.

Content

Students will be able to:

- Graph systems of linear equations or inequalities
- Solve by the substitution method

- Solve by the elimination method
- Translate real world problems into a system

Vocabulary:

- System
- Solution of a system
- Substitution
- Elimination
- No solution

Assessments

Resources

- Pearson textbook and online resources
- Teacher made flip-charts
- Web-based activities (mathplayground.com) (coolmath.com)
- Teacher made worksheets/assessments
- NJCTL.org (PMI math)
- Pizzazz series of worksheets