Systems of Equations & Inequalities

Solve systems of equations (5.1)

CCSS	4 – Mastery	3 – Proficient	2 - Basic	1 – Below Basic	0 – No Evidence
Create systems of equations (A.CED.2*) **Solve systems of equations** (A.CED.2, A.REI.6, A.CED.4*)	Can extend thinking beyond the standard, including tasks that may involve one of the following: • Designing • Connecting • Synthesizing • Applying • Justifying • Critiquing • Analyzing • Creating • Proving	Create a system of equations to model a situation Solve a system of linear equations approximately (graphing **with labels and scales**) and exactly (algebraically) when multiplication or rearranging is necessary	**Create** a system of equations to model a situation Solve a system of linear equations approximately (graphing) and exactly (algebraically) **when multiplication or rearranging is necessary**	**Identify** a system of equations to model a situation Solve a system of linear equations approximately (graphing) and exactly (algebraically)	Little evidence of reasoning or application to solve the problem Does not meet the criteria in a level 1
Explaining solutions (A.REI.5, A.REI.11*)		Explain a solution to a system of equations (algebraically, graphically, or with tables) **in context of a given situation**	**Explain a solution** to a system of equations (algebraically, graphically, or with tables)	**Verify** solutions to a system of equations (algebraically, graphically, or with tables)	

A.REI.6 Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables. .

A.CED.2* Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.

A.CED.4* Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations.

A.REI.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

A.REI.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 solutions to f(x) = g(x) 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, quadratic, or exponential functions. *(Modeling Standard)

Systems of Equations & Inequalities

Solve and use systems of inequalities in decision making (5.1/5.2)

CCSS	4 – Mastery	3 – Proficient	2 - Basic	1 – Below Basic	0 – No Evidence
Graph inequalities and systems of Inequalities (A.REI.12, A.CED.4)	Can extend thinking beyond the standard, including tasks that may involve one of the following: • Designing • Connecting • Synthesizing • Applying • Justifying • Critiquing • Analyzing • Creating • Proving	Graph a system of linear inequalities in two variables from contextual situations **(standard form)** and identify the solution set.	Graph **a system of linear** inequalities in two variables from contextual situations (slope intercept form) and identify the solution set.	Graph **a linear inequality** in two variables from contextual situations (slope intercept form) and identify the solution set.	Little evidence of reasoning or application to solve the problem Does not meet the criteria in a level 1
Represent constraints and interpret solutions (A.CED.3*)		Write the constraints for a contextual situation **Interpret solutions as viable or nonviable options** in context of the situation.	**Write** the constraints for a contextual situation Interpret solutions **in context of the situation.**	Identify the constraints for a contextual situation Identify solutions	

A.REI.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

A.CED.4* Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations.

A.CED.3* Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context.