

Mini-Map for M.EE.HS.A.CED.2-4

Subject: Mathematics Algebra—Creating Equations (A.CED) Grade: 10

Learning Outcome

DLM Essential Element	Grade-Level Standard
M.EE.HS.A.CED.2-4 Solve one-step inequalities.	M.A.CED.2 Create equations in two or more variables to
	represent relationships between quantities; graph equations on
	coordinate axes with labels and scales.
	M.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.
	M.A.CED.4 Rearrange formulas to highlight a quantity of
	interest, using the same reasoning as in solving equations.

Linkage Level Descriptions

Initial Precursor	Distal Precursor	Proximal Precursor	Target	Successor
Combine two or more	Represent addition,	Solve linear equations	Solve linear inequalities	Explain a solution to a
sets of objects or	subtraction,	involving addition,	in one variable (e.g., x +	linear inequality in one
numbers to form a new	multiplication, or	subtraction,	7 < 14), and represent	variable (e.g., x < 8
set. Divide a set of 10 or	division word problems	multiplication, or	solutions to inequalities	means that x takes all
fewer objects into two	or models with	division operations in	on a number line.	the values less than 8;
or more distinct subsets	equations (e.g.,	one variable (e.g., 8.4 +		i.e., 7, 6, 5).
(e.g., dividing a set	representing 6 marbles	<i>x</i> = 17.56).		
containing 10 objects	plus 2 marbles equal 8			
into two subsets	marbles as 6 + 2 = 8			
containing 4 and 6	marbles).			
objects).				

Initial Precursor and Distal Precursor Linkage Level Relationships to the Target

How is the Initial Precursor related to the Target?

The knowledge needed to solve one-step inequalities requires students to manipulate sets (i.e., combining and separating or partitioning). Provide students many opportunities to take a set of objects (e.g., tiles, linking cubes, buttons) and separate them based on a given characteristic (e.g., shape, color, size) into two distinct sets, then separate them again based on another characteristic. Guide students to notice how the set size changes each time you combine or partition the sets.



How is the Distal Precursor related to the Target?

As students begin to understand labeling and counting sets, they begin to use the number sequence and become more adept at tracking individual objects. Work on this skill using a variety of sets, labeling and counting the sets, and moving items in and out of the sets, labeling and counting the set again. Additionally, the educators will pair those sets with the symbolic representations for addition, subtraction, multiplication, and division (e.g., 3 + 2 = ?, $3 \times 2 = ?$).

Instructional Resources

Released Testlets	
See the Guide to Practice Activities and Released Testlets.	
Using Untested (UN) Nodes	
Using Untested (UN) Nodes	

Link to Text-Only Map

M.EE.HS.A.CED.2-4 Solve one-step inequalities.

