

# Mini-Map for M.EE.6.EE.5-7

Subject: Mathematics Expressions and Equations (EE) Grade: 6

## Learning Outcome

DLM Essential Element	Grade-Level Standard
<b>M.EE.6.EE.5-7</b> Match an equation to a real-world problem in which variables are used to represent numbers.	<b>M.6.EE.5</b> Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true. <b>M.6.EE.6</b> Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set. <b>M.6.EE.7</b> Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which $p$ , $q$ and $x$ are all nonnegative rational numbers.

## Linkage Level Description

Initial Precursor	Distal Precursor	Proximal Precursor	Target	Successor
Combine two sets of	Represent addition or	Represent expressions	Represent a given real-	Solve real-world
objects to form a new	subtraction word	using variables and	world problem (e.g., Joe	problems with non-
set. Divide objects in a	problems or models	numbers (e.g., express	has 6 markers. Joe has	negative rational
set into two or more	with equations (e.g.,	subtract k from 12 as 12	some crayons. Joe has a	numbers by
subsets.	representing 6 marbles	- <i>k</i> ). Recognize that the	total of 10 art supplies.	representing the
	plus 2 marbles equal 8	unknown quantity in an	How many crayons does	situation with a
	marbles as 6 + 2 = 8	equation is represented	Joe have?) with a	mathematical equation
	marbles).	using a symbol or letter	mathematical equation	(e.g., Mark has 3.5
		(e.g., 5 + <i>b</i> = 8).	(e.g., 6 + <i>x</i> = 10).	

		inches of string. Mark gets 1 more inch of string. Which equation shows how much string Mark has all together? 3.5 + 1 = x).

#### 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 addition and subtraction realworld problems links back to an understanding of how to create sets, but it also requires learning 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, and separate them again based on another characteristic. Guide students to notice how the set size changes each time the educator combines or partitions the sets.

How is the Distal Precursor related to the Target? As student understanding of combining and partitioning sets increases, educators should take care to use the words "addition" and "subtraction" while defining and demonstrating their meanings and as students combine and partition sets. While students do not need to say the words, they do need to learn the meanings. Educators provide lessons that help students represent addition and subtraction in multiple ways (e.g., using objects, fingers, drawings, sounds, acting out situations, and writing equations).

#### **Instructional Resources**





**M.EE.6.EE.5-7** Match an equation to a real-world problem in which variables are used to represent numbers.