

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

Linkage Level Description

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

Initial Precursor	Distal Precursor	Proximal Precursor	Target	Successor
				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 real-world 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?

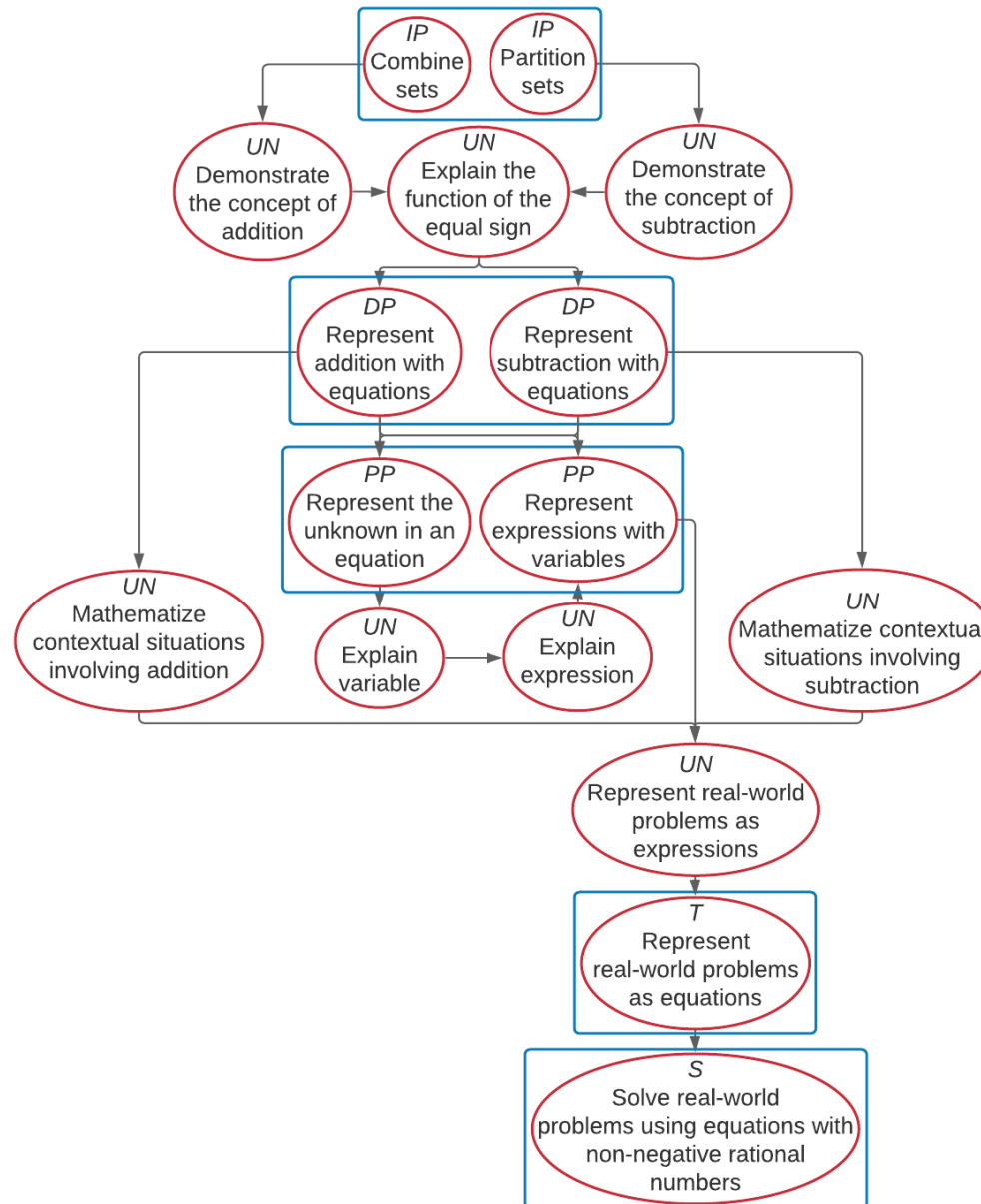
As student understanding of combining and partitioning sets increases, educators should take care to use the words “addition” and “subtraction” while defining and demonstrating their meanings and as students combine and partition sets. While students do not need to say the words, they do need to learn 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

Released Testlets
See the Guide to Practice Activities and Released Testlets .
Using Untested (UN) Nodes
See the document Using Mini-Maps to Plan Instruction .

[Link to Text-Only Map](#)

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



Map Key	
IP	Initial Precursor
DP	Distal Precursor
PP	Proximal Precursor
T	Target
S	Successor
UN	Untested
Boxes indicate tested nodes	