

## Mini-Map for M.EE.HS.A.CED.1

Subject: Mathematics

Algebra—Creating Equations (A.CED)

Grade: 10

### Learning Outcome

DLM Essential Element	Grade-Level Standard
<b>M.EE.HS.A.CED.1</b> Create an equation involving one operation with one variable, and use it to solve a real-world problem.	<b>M.A.CED.1</b> Create equations and inequalities in one variable, and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions.

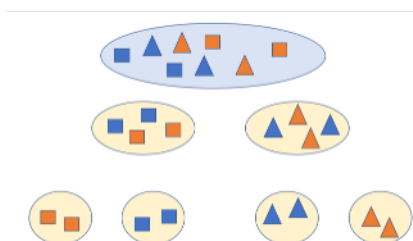
### Linkage Level Descriptions

Initial Precursor	Distal Precursor	Proximal Precursor	Target	Successor
Combine two or more sets of objects or numbers to form a new set. Divide a set of 10 or fewer objects into two or more distinct subsets (e.g., dividing a set containing 10 objects into two subsets containing 4 and 6 objects).	Represent addition, subtraction, multiplication, or division word problems or models with equations (e.g., representing 6 marbles plus 2 marbles equal 8 marbles as $6 + 2 = 8$ marbles).	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., $5 + b = 8$ ).	Solve real-world problems with non-negative rational numbers by representing the situation with a mathematical equation (e.g., Mark has 3.5 inches of string. Mark gets 1 more inch of string. Which equation shows how much string Mark has all together? $3.5 + 1 = x$ ).	Solve equations with non-negative rational numbers involving addition, subtraction, multiplication, or division operations in one variable (e.g., $8.4 + x = 17.56$ ).

## Initial Precursor and Distal Precursor Linkage Level Relationships to the Target

### *How is the Initial Precursor related to the Target?*

Representing and solving equations requires a student to count small units, recognizing that two or more sets or groups of items exist. Work on this skill using a variety of sets. Help students recognize when items are grouped together into a set or separated out. The educator presents a set, labels it (e.g., two balls, one marker, three CDs), counts the items, labels it again, and encourages students to use numbers to label and count the separate sets. The general goal is to explore how the set changes when items are separated out (partitioned) or combined.



### *How is the Distal Precursor related to the Target?*

As students begin to understand labeling and counting small 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.,  $3 \times 2 = ?$ ,  $3 - 2 = ?$ ).

NOTE: Educators can work on the Distal Precursor level using the sets of numbers that students working at the Target level are working with.

## Instructional Resources

Released Testlets
See the <a href="#">Guide to Practice Activities and Released Testlets</a> .
Using Untested (UN) Nodes
See the document <a href="#">Using Mini-Maps to Plan Instruction</a> .

[Link to Text-Only Map](#)

**M.EE.HS.A.CED.1** Create an equation involving one operation with one variable, and use it to solve a real-world problem.

