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

Subject: Mathematics
Algebra—Seeing Structure in Expressions (A.SSE)
Grade: 9

## Learning Outcome

| DLM Essential Element | Grade-Level Standard |
|---|---|
| **M.EE.HS.A.SSE.1** Identify an algebraic expression involving one arithmetic operation to represent a real-world problem. | **M.A.SSE.1** Interpret expressions that represent a quantity in terms of its context. |

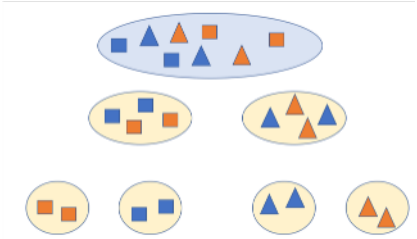
## Linkage Level Descriptions

| 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). | Represent real-world problems using expressions and equations. | Solve real-world problems by representing problems using equations with non-negative rational numbers. |

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

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

The knowledge needed to represent equations 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 × 2 =?).

## Instructional Resources

| Released Testlets |
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| 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.HS.A.SSE.1** Identify an algebraic expression involving one arithmetic operation to represent a real-world problem.