

Mini-Map for M.EE.8.EE.7

Subject: Mathematics

Expressions and Equations (EE)

Grade: 8

Learning Outcome

DLM Essential Element	Grade-Level Standard	
M.EE.8.EE.7 Solve simple algebraic equations with one variable	M.8.EE.7 Solve linear equations in one variable.	
using addition and subtraction.		

Linkage Level Descriptions

Initial Precursor	Distal Precursor	Proximal Precursor	Target	Successor
Combine two or more	Demonstrate	Determine the	Solve linear equations	Solve linear inequalities
sets of objects or	understanding of	unknown/missing	involving addition,	in one variable (e.g., 6 <
numbers to form a new	addition by combining	addend (e.g., $8 + x = 12$)	subtraction,	8 + x).
set. Split one set into	the objects of two or	or sum (e.g., $4 + 6 = x$)	multiplication, or	
multiple sets grouped	more sets and	when given an equation	division operations in	
together by similar	demonstrate	with addition operation	one variable (e.g., 8.4 +	
characteristics.	understanding of	and determine the	x = 17.56).	
	subtraction by	unknown/missing		
	removing some objects	minuend or subtrahend		
	from a larger set.	(e.g., $9 - x = 16$) or the		
		difference (e.g., 13 - 5 =		
		x) when given an		
		equation with		
		subtraction operation.		

Initial Precursor and Distal Precursor Linkage Level Relationships to the Target

How is the Initial Precursor related to the Target?

Solving linear 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. They can recognize when items are added to a set or when items are taken away. Work on this skill using a variety of sets, labeling and counting the set, and moving items in and out of the set, labeling and counting the set again.

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 Guide to Practice Activities and Released Testlets.

Using Untested (UN) Nodes

See the document <u>Using Mini-Maps to Plan Instruction</u>.

M.EE.8.EE.7 Solve simple algebraic equations with one variable using addition and subtraction.

