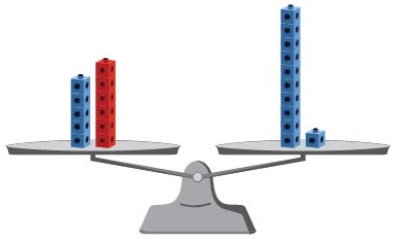
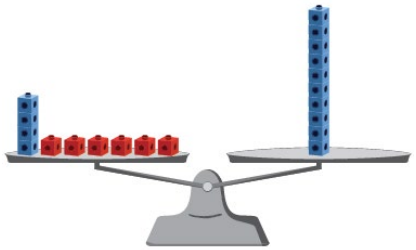
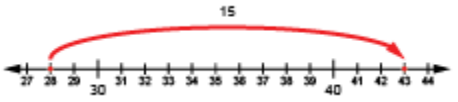
Patterning and Algebra

Activity 11 Assessment
Creating Equations

Solving One-Step Addition and Subtraction Equations		
Understands balance as equality	Uses concrete materials to solve for unknown	Uses number relationships (inverse operations)
 "5 + 6 equals 11."	 4 + ☐ = 10 "I added red cubes, one at a time, until the pans balanced; ☐ = 6."	 28 = ☐ − 15 "I rewrote the equation as an addition equation: 28 + 15 = ☐."
Observations/Documentation		

Patterning and Algebra

Activity 11 Assessment
Creating Equations

Solving One-Step Addition and Subtraction Equations (con't)		
Decomposes and recomposes numbers (uses associative property) 28 + 15 = 28 + 2 + 13 28 + 2 + 13 = 30 + 13 30 + 13 = 43	Describes a situation for a given equation with an unknown 20 − ☐ = 13 "I had $20. I spent some money and now I have $13. How much did I spend?"	Uses strategies efficiently and flexibly to solve equations of different types (start, result, and change unknown) 27 = Δ − 18 "I rewrote using addition: 27 + 18 = Δ. Then, I used mental math: 27 + (18 + 2) = 47, and 47 – 2 = 45."
Observations/Documentation		

Patterning and Algebra

Activity 11 Assessment
Creating Equations

Variables and Symbols			
Uses equal sign as balance (left side equals right side) and not equal sign as imbalance 18 + 16 = 10 + 24 18 + 16 ≠ 24 – 10 "The equal sign means that the numbers on both sides are worth the same amount."	Uses symbols to represent unknown quantities 18 + ☐ = 34 "I used a box to represent the unknown, but I could have used a different shape."	Understands the unknown represents one quantity/value 18 + ☐ = 34 "The box represents a number that would be added to 18 to make 34. No matter what the symbol is, it will always represent 16."	Solves equations flexibly 18 + ☐ = 34 34 − ☐ = 18 34 – 18 = ☐ "In all of these equations, the symbol represents the same number, 16."
Observations/Documentation			