Activity 12 Assessment
Creating Equations

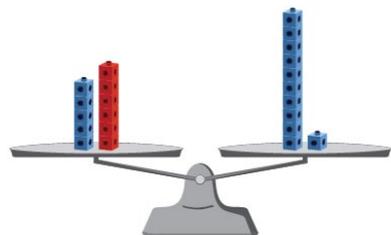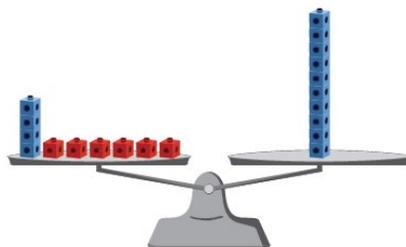## Solving One-Step Addition and Subtraction Equations
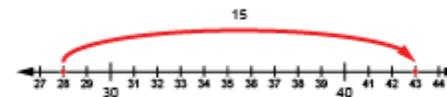
Understands balance as equality	Uses concrete materials to solve for unknown	Uses number relationships (inverse operations)

"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

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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 $20 - \square = 13$ "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) $27 = \triangle - 18$ "I rewrote using addition: $27 + 18 = \triangle$. Then, I used mental math: $27 + (18 + 2) = 47$, and $47 - 2 = 45$."
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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 $18 + \square = 34$ "I used a box to represent the unknown, but I could have used a different shape."	Understands the unknown represents one quantity/value $18 + \square = 34$ "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 $18 + \square = 34$ $34 − \square = 18$ $34 − 18 = \square$ "In all of these equations, the symbol represents the same number, 16."
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