Patterns and Relations

Activity 7 Assessment

Solving Equations Involving the Distributive Property

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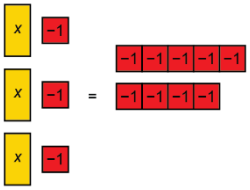
Uses algebra tiles to represent an equation of the form $a(x + b) = c$	Rewrites an equation of the form $a(x + b) = c$ by expanding symbolically or dividing both sides by a	Solves an equation of the form $a(x + b) = c$, and checks their solution	Determines whether a worked solution for an equation of the form $a(x + b) = c$ is correct and fixes any mistakes
I used tiles to model $3(x - 1) = -9$.  	$3(x - 5) = -20$ can be written as $(3)(x) - (3)(5) = -20$, or $3x - 15 = -20$	I used the Distributive Property to rewrite $3(x - 5) = -20$ as $3x - 15 = -20$. I added 15 to each side: $3x - 15 + 15 = -20 + 15$ $3x = -5$ I divided both sides by 3: $\frac{-3x}{3} = \frac{-5}{3}$ $x = -\frac{5}{3}$ I substituted $-\frac{5}{3}$ for x in the equation $3x - 15 = -20$: L.S. $= 3(-\frac{5}{3}) - 15$ $= -5 - 15$ $= -20$ R.S. $= -20$ L.S. = R.S. My solution is correct.	$-2(x - 4) = 12$ $-2x - 8 = 12$ $-2x - 8 + 8 = 12 + 8$ $-2x = 20$ $x = -10$ The error in this solution happens in the first step. $(-2)(-4)$ is +8, not –8. The corrected solution is: $-2(x - 4) = 12$ $-2x + 8 = 12$ $-2x + 8 - 8 = 12 - 8$ $-2x = 4$ $x = -2$ To check, I substitute –2 for x in the equation. L.S. $= -2(-2 - 4)$ $= -2(-6)$ $= 12$ R.S. = 12 L.S. = R.S.

Observations/Documentation
