Algebra--Distributive Property

Big Ideas:
> Distribute Parenthesis before combining like terms.
> Combine like terms before beginning to isolate the variable
> Use the additive inverse when working with integers (include the signs in front of the integers)

Steps:
1. Analyze the problem.
2. Distribute.
3. Collect like terms.
4. Do the inverse in revers order of operations. (Undo the equation.)
5. Isolate the variable.

Examples:

$5(x - 4) = 3(x + 2)$

$5x - 20 = 3x + 6$

$+20 +20$

$5x = 3x + 26$

$-3x -3x$

$\dfrac{2x}{2} = \dfrac{26}{2}$

$x = 13$

$2(x - 2) - 5(2x + 1) = 15$

$2x - 4 - 10x - 5 = 15$

$-8x - 9 = 15$

$+9 +9$

$\dfrac{-8x}{-8} = \dfrac{24}{-8}$

$x = -3$

$-3 - (x + 3) = -1 + 2(x - 3)$

$-3 - x - 3 = -1 + 2x - 6$

$-x - 6 = 2x - 7$

$+7 +7$

$-x + 1 = 2x$

$+x +x$

$\dfrac{1}{3} = \dfrac{3x}{3}$

$\dfrac{1}{3} = x$