Linear Equations; Distributive Property

Strategy

Transform equations that you don't recognize into ax + b = c format by using the Properties of Real Numbers.

Get rid of the parentheses by using the Distributive Property, combine "like" terms, then go back to our original strategy – write the equation in the ax + b = c format and use the Order of Operations in reverse using the (inverse) opposite operation.

- Example: Solve for x; 8x - 2(3x - 7) = 10 8x - 6x + 14 = 10 2x + 14 = 10 2x = -4x = -2
- 1. 3(2x+1) 4 = 11 2. 4(3x-2) 2x = 22
- 3. 10-2(x-4) = 124. 3(2x-3) + 4x = 5x + 16
- 5. 8-3(x-2) = -7 6. 7+2(x+4) = 21
- 7. 8x 4(2x + 3) = -128. 8x - 4(2x + 3) = 7

We can <u>not</u> make these more difficult, we can only make them longer! Get rid of the parentheses, combine like terms, and write equation in ax + b = c format.

9.
$$5(2x+3)-2(x-4)=2x-1$$

10. 5(2x+3) - 3(x-2) = 2(2x+1) + 2