Name_____

SOLVING EQUATIONS—THE DISTRIBUTIVE PROPERTY #1

Directions: Solve for x in each equation below. You can attack this problem several ways. *Example 1* shows you how to use the distributive property to simplify the equations, then use inverse operations to isolate the variable. *Example 2* shows you how to divide both sides by the number being distributed, then use inverse operations to isolate the variable.

Examples:
$3(2x + 10) = 48$ (*distribute 3 to each term)*) $5(3 + 2x) = 25$ (*divide by 5 on both sides*)
$6x + 30 = 48$ (*subtract 30 from both sides*) $3 + 2x = 5$ (*subtract 3 from both sides*)
$6x = 18$ (*divide both sides by 6*) $2x = 2$ (*divide both sides by 2*)
x = 3   **x = 1**

1) $3(2x + 10) = 54$ 2) $6(4x + 1) = 78$ 3) $2(x + 10) = 60$ 4) $4(3x + 2) = 68$

$x =$ _____ $x =$ _____ $x =$ _____ $x =$ _____

5) $9(2 + 3x) = 45$ 6) $8(4 + x) = 64$ 7) $2(10 + 10x) = 60$ 8) $4(3 + 2x) = 76$

$x =$ _____ $x =$ _____ $x =$ _____ $x =$ _____

9) $5(2x + 10) = 50$ 10) $2(12 + 3x) = 42$ 11) $15(x + 3) = 60$ 12) $2(20 + 2x) = 80$

$x =$ _____ $x =$ _____ $x =$ _____ $x =$ _____