Using the Distributive Property with Integers

Recall:	1) $2(x + 4)$ Means 2 groups of $x + 4$ $x + 4 + x + 4$ $= 2x + 8$. The shortcut for the distributive property is to "distribute" the number on the outside to *everyone* term on the inside of the parentheses. $2(x + 4) = 2(x) + 2(4) = 2x + 8$
Try:	a) $3(x - 6)$ b) $4(x + 5 + 9)$ c) $2(2x + 4)$ d) $4(3x - 6)$
Distribute a Negative	When a negative number is our coefficient, we must use our integer rules: ex 1) $-2(x + 4)$ means "the opposite of 2 groups of $x + 4$" $-2(x) + (-2)(4)$ $=-2x + (-8)$ or $-2x - 8$

Examples	ex 2) $-3(x - 6)$ $-3(x) - (-3)(6)$ $=-3x - (-18)$ $= -3x + 18$
Practice	1) $2(x - 8)$ 2) $-5(x + 9)$ 3) $-3(x - (-3))$ 4) $-6(-2x + 5)$ 5) $-3(-2x - 4)$

Simplifying Expressions with Integers and Distributive Property	Simplify Each Expression: 1) $3 - 3(x - 2)$ 2) $-(1 - 5n) - 7n$ 3) $8 + 7(7n - 4)$ 4) $4x + 5(3x - 3)$ 5) $1 - 8x - 5x$ 6) $5 - 2(8x + 4)$ 7) $7 + 6x + 9(x + 1)$ 8) $-3 + 8x + 2$ 9) $5 - 8n - 4n$ 10) $9 + 3x + 1 - 2x$

6A