

Name _____

Hr. _____ Date _____

DP-A

Distributive Property A

You won't be able to accurately solve equations until you understand and are able to apply the Distributive Property (Law).

General statement: $a(b+c) = ab+ac$

Example 1: $3(4+5) = 3(4)+3(5)$. Since there are only constants in this expression, you could have simplified the parentheses first, then multiplied by 3 to get 27.

Do you also get 27 if you add $3(4)+3(5)$? _____

Example 2: $3(x+5) = 3(x)+3(5)$. We write $3(x)$ as $3x$ and $3(5) = 15$. So, $3(x+5) = 3x+15$

Why could we NOT simplify the parentheses in Example 2? _____

1)	$3(x+4)$ $3x + 12$	$2(x+5)$ $2x + 10$	$5(x+1)$ $5x + 5$	$7(x+3)$ $7x + 3$	$4(x+9)$ $4x + 36$	$9(x+4)$ $9x + 36$	$8(x+7)$ $8x + 56$
2)	$3(2x+4)$ $6x + 12$	$2(2x+5)$ $4x + 10$	$5(2x+1)$ $10x + 5$	$7(2x+3)$ $14x + 21$	$4(2x+9)$ $8x + 36$	$9(2x+4)$ $18x + 36$	$8(2x+7)$ $16x + 56$
3)	$3(3x+5)$ $9x + 15$	$2(4x+3)$ $8x + 6$	$7(4x+1)$ $28x + 7$	$6(7x+9)$ $42x + 54$	$1(3x+7)$ $3x + 7$	$9(2x+11)$ $18x + 99$	$7(4x+18)$ $28x + 126$
4)	$-(2x+1)$ $-2x + -2$ $-2x - 2$	$-(4x+3)$ $-4x + -3$ $-4x - 3$	$-(7x+3)$ $-7x + -3$ $-7x - 3$	$-(5x+10)$ $-5x + -10$ $-5x - 10$	$-(11x+2)$ $-11x + -2$ $-11x - 2$	$-(21x+8)$ $-21x + -8$ $-21x - 8$	$-(4x+7)$ $-4x + -7$ $-4x - 7$
5)	$3(x-4)$ $3x - 12$	$2(x-5)$ $2x - 10$	$5(x-1)$ $5x - 5$	$7(x-3)$ $7x - 21$	$4(x-9)$ $4x - 36$	$9(x-4)$ $9x - 36$	$8(x-7)$ $8x - 56$
6)	$3(-2x+4)$ $-6x + 12$	$2(-2x+5)$ $-4x + 10$	$5(-2x+1)$ $-10x + 5$	$7(-2x+3)$ $-14x + 21$	$4(-2x+9)$ $-8x + 36$	$9(-2x+4)$ $-18x + 36$	$8(-2x+7)$ $-16x + 56$
7)	$3(-3x-5)$ $-9x - 15$	$4(-3x-5)$ $-12x - 20$	$7(-5x-3)$ $-35x - 21$	$8(-4x-1)$ $-31x - 8$	$5(-4x-3)$ $-20x - 15$	$2(-10x-11)$ $-20x - 22$	$3(-5x-2)$ $-15x - 6$
8)	$3(-x+3)$ $-3x + 9$	$4(-x+2)$ $-4x + 8$	$7(-x+5)$ $-7x + 35$	$9(-x+5)$ $-9x + 45$	$2(-x+19)$ $-2x + 38$	$6(-x+6)$ $-6x + 36$	$8(-x+5)$ $-8x + 40$
9)	$4(-x-5)$ $-4x - 20$	$5(-x-5)$ $-5x - 25$	$3(-x-10)$ $-3x - 30$	$9(-x-8)$ $-9x - 72$	$2(-x-1)$ $-2x - 2$	$7(-x-6)$ $-7x - 42$	$6(-x-6)$ $-6x - 36$
10)	$-3(x+4)$ $-3x + -12$ $-3x - 12$	$-2(x+5)$ $-2x + -10$ $-2x - 10$	$-5(x+1)$ $-5x + -5$ $-5x - 5$	$-7(x+3)$ $-7x + -21$ $-7x - 21$	$-4(x+9)$ $-4x + -36$ $-4x - 36$	$-9(x+4)$ $-9x + -36$ $-9x - 36$	$-8(x+7)$ $-8x + -56$ $-8x - 56$
11)	$-3(2x+4)$ $-6x + -12$ $-6x - 12$	$-2(2x+5)$ $-4x + -10$ $-4x - 10$	$-5(2x+1)$ $-10x + -5$ $-10x - 5$	$-7(2x+3)$ $-14x + -21$ $-14x - 21$	$-4(2x+9)$ $-8x + -36$ $-8x - 36$	$-9(2x+4)$ $-18x + -36$ $-18x - 36$	$-8(2x+7)$ $-16x + -56$ $-16x - 56$
12)	$-3(2x-1)$ $-6x + 3$	$-2(4x-3)$ $-8x + 6$	$-7(4x-1)$ $-28x + 7$	$-6(7x-9)$ $-42x + 54$	$-1(3x-7)$ $-3x + 7$	$-9(2x-11)$ $-18x + 99$	$-7(4x-18)$ $-28x + 126$
13)	$-3(-2x-4)$ $6x + 8$	$-2(-2x-5)$ $4x + 10$	$-5(-2x-1)$ $10x + 5$	$-6(-3x-2)$ $18x + 12$	$-2(-2x-9)$ $4x + 18$	$-(-x-1)$ $x + 1$	$-9(-9x-4)$ $81x + 36$