9 Properties

4 • 2 + 1

addition		Property		multiplication
$a + b = b + a$	**C**	**Commutative** Property	**order**	$a \cdot b = b \cdot a$
$(a + b) + c = a + (b + c)$	**A**	**Associative** Property	**group**	$(a \cdot b) \cdot c = a \cdot (b \cdot c)$
$a + 0 = a$	**ID**	**Identity** Property	what you can add or multiply by **so it doesn't change**	$a \cdot 1 = a$
$n + -n = 0$	**Inv**	**Inverse** Property	what you can ***add...*** **so it goes to 0**	
			what you can ***multiply by...*** **so it goes to 1**	$a \cdot \frac{1}{a} = 1$

Distributive Property

$3 (a + b) = 3a + 3b$

		a	b
3	1		
	1		
	1		