

Properties of Real Numbers

Property	Addition	Multiplication
Commutative	$4 + 5 = 5 + 4$ $9 = 9$	$3 \cdot 7 = 7 \cdot 3$ $21 = 21$
Associative	$(2 + 5) + 6 = 2 + (5 + 6)$ $(7) + 6 = 2 + (11)$ $13 = 13$	$3(4x \cdot 6) = (3 \cdot 4x)6$ $3(24x) = (12x)6$ $72x = 72x$
Distributive	$3(4x + 5) = (3 \cdot 4x) + (3 \cdot 5) = 12x + 15$ $(9x - 2)5 = (9x \cdot 5) - (2 \cdot 5) = 45x - 10$	
Identity	The additive identity element is 0. $5 + 0 = 5$	The Multiplicative identity element is 1. $3 \cdot 1 = 3$
Inverse	$7 + (-7) = 0$	$5 \cdot \frac{1}{5} = 1$
Zero Factor Law	$7 \cdot 0 = 0$	