

<b>Property</b>	<b>General Example</b>
<b>Addition Property of Equality</b>	If $a = b$ , then $a + c = b + c$
<b>Subtraction Property of Equality</b>	If $a = b$ , then $a - c = b - c$
<b>Multiplication Property of Equality</b>	If $a = b$ , then $a * c = b * c$
<b>Division Property of Equality</b>	If $a = b$ , then $a/c = b/c$
<b>Substitution Property (Simplify)</b>	If $a = b$ , then you may replace $b$ with $a$ in any expression
<b>Transitive Property</b>	If $a = b$ and $b = c$ , then $a = c$
<b>Commutative Property of Addition</b>	$a + b = b + a$
<b>Associative Property of Addition</b>	$(a + b) + c = a + (b + c)$
<b>Commutative Property of Multiplication</b>	$a * b = b * a$
<b>Associative Property of Multiplication</b>	$(a * b) * c = a * (b * c)$
<b>Distributive Property</b>	$a(b + c) = a*b + a*c$
<b>Symmetric Property</b>	If $a = b$ , then $b = a$
<b>Reflexive Property</b>	$a = a$

Property	Example
<b>Addition Property of Equality</b>	$x - 2 = 5$ $x - 2 + 2 = 5 + 2$ $x = 7$
<b>Subtraction Property of Equality</b>	$x + 2 = 5$ $x + 2 - 2 = 5 - 2$ $x = 3$
<b>Multiplication Property of Equality</b>	$\frac{x}{2} = 5$ $2 * \frac{x}{2} = 5 * 2$ $x = 10$
<b>Division Property of Equality</b>	$5x = 10$ $\frac{5x}{5} = \frac{10}{5}$ $x = 2$
<b>Substitution Property</b>	$(5 + 2)x = 14$ $7x = 14$
<b>Distributive Property</b>	$5(x + 2) = 14$ $5x + 10 = 14$