

Number Properties

1. Associative Property

"Associative" comes from "associate" or "group", so the Associative Property is the rule that refers to grouping.

- For *addition*, the rule is " $a + (b + c) = (a + b) + c$ "; in numbers, this means $2 + (3 + 4) = (2 + 3) + 4$.
- For *multiplication*, the rule is " $a(bc) = (ab)c$ "; in numbers, this means $2(3 \times 4) = (2 \times 3)4$.

Write an example demonstrating this property for both addition and multiplication.

Addition: _____

Multiplication: _____

2. Commutative Property

"Commutative" comes from "commute" or "move around", so the Commutative Property is the one that refers to moving stuff around.

- For addition, the rule is " $a + b = b + a$ "; in numbers, this means $2 + 3 = 3 + 2$.
- For multiplication, the rule is " $ab = ba$ "; in numbers, this means $2 \times 3 = 3 \times 2$.

Write an example demonstrating this property for both addition and multiplication.

Addition: _____

Multiplication: _____

3. Identity Property

- For addition, the sum of any number and zero (0) is the original number. $7 + 0 = 7$
- For multiplication, the product of any number and one (1) is the original number.
 $7 \times 1 = 7$

4. Distributive Property

The Distributive Property is easy to remember, if you recall that "multiplication *distributes* over addition". The Distributive Property is an algebra property which is used to multiply a single term and two or more terms inside a set of parentheses.

Example: $6(2+4x) = 6 * 2 + 6 * 4x$ Simplified answer is: $12 + 24x$

Write an example demonstrating this property:
