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| **Property** | **Definition** | **Algebraic Definition** | **Example** |
| **Reflexive Property** | Any number is equal to itself. |  |  |
| **Symmetric Property** | You switch sides of the equals sign. |  |  |
| **Transitive Property** | If two separate terms are equal to a third term, then the two terms are equal. |  | so |
| **Commutative Property** | You can add any 2 numbers in any order and get the same answer. |  |  |
| **Associative Property** | You can rearrange grouping in an addition problem and get the same answer. |  |  |
| **Addition Property** | As long as you add the same number to both sides of an equation, the equation is still equal. | If , then | If , then |
| **Multiplication Property** | You can multiply both sides of an equation by the same number and the equation is still true. |  |  |
| **Additive Identity** | You can add 0 to anything and it doesn’t change. |  |  |
| **Multiplicative identity** | You can multiply anything by 1 and it doesn’t change. |  |  |
| **Property of Opposites** | If you add opposite numbers, it will equal 0. |  |  |
| **Property of Reciprocals** | If you multiply by a reciprocal, it equals 1. |  |  |
| **Distributive Property** | Multiplying a number into parenthesis, or pulling a number out of parenthesis. | or | or |
| **Zero Product Property** | If the product of two numbers is 0, then at least one of those numbers must be 0. |  | then |