**UNIT 2: POWER WORDS**

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| **Commutative property:** *A real number property used to switch the order of the number s or variables when added or multiplied. The word commutative comes from commute which means move around* | $$x+y=y+x $$$$xy=yx $$ |
| **Associative Property:** *A real number property used to group numbers or variables when added or multiplied. The word Associative comes from Associate which means group* | $$x+\left(y+z\right)=\left(x+y\right)+z$$x(yz)=(xy)z |
| **Distributive property:** *A real number property used to distribute Multiplication over addition to get rid of the parenthesis*  | $x\left(y+z\right)=xy+xz$  |
| **Identity property:***A real number property used to preserve the value of the number or variable* | *Additive Identity* $x+0=x $Multiplicative Identity: x(1)= x |
| **Inverse Property***A real number property used to bring back a number or variable to 1 when multiplied or zero when added.* | Additive Inverse: 3+-3=0Multiplicative inverse: $2\left(\frac{1}{2}\right)=1$ |
| **Zero product property:***A real number property used to multiply a number or value by zero to equal zero* | 3 (0) = 0 x(0)= 0 |
| **Equation**A mathematical statement with an equal sign | $$x^{2}-4=4x$$ |
| **Equivalent expressions**Two expressions that equal each other | $$x^{2}+4x+4=(x+2)(x+2)$$ |
| **Addition/ Subtraction property of equality**adding the same value to both sides of an equation will not change the truth value of the equation | 2x = 42x +3 =4+3  |
| **Multiplicative property of equality**multiplying the same value to both sides of an equation will not change the truth value of the equation | 2x = 4(3) (2x) = (4) (3)  |
| **Division property of equality**multiplying the same value to both sides of an equation will not change the truth value of the equation | 2x = 4(2x)/3 = (4)/3  |
| **Literal Equation:***An Equation that has more than 2 variables. It is used in formulas.* | $$A=LW$$ |
| **Consecutive integers:***Integers that follow each other in order* | 2, 3,4 ,5 |
| **Consecutive odd integers;**Odd integers that follow each other in order | 1, 3, 5, 7 |
| **Consecutive Even integers:**Even integers that follow each other in order | 2, 4, 6, 8 |
| **Inequality:**A mathematical statement with one of the inequality sign | $$2x+3>-4$$ |
| **Compound Inequality:**Two inequalities connected together by or OR and  | $$-2<2x+3<6$$ |