**Laws of Exponents**

1. **Product (Multiplication) Law:** to multiply powers that have the same base, write down the same base and place the sum of the exponents of the powers in the original expression as its exponent.

 

2. **Quotient (Division) Law:** to divide powers that have the same base, write down the same base and place the difference of the exponents of the powers in the original expression as its exponent.

 

 3. **Power of a Power Law:** When you have a power raised to another exponent, multiply the two exponents and keep the base the same.



4. **Power of a Product Law**: When you have a product raised to a power, apply the power to both bases

 

5. **Power of a Quotient:** When you have a quotient raised to a power, apply the power to both the numerator and denominator.





6. **Zero Exponent Law:** A co-efficient or variable with an exponent of zero is equal to 1.   In other words, any value with an exponent of zero is 1.

 

7. **Negative Exponent Law (Integral Exponent Law):** A base with a negative exponent written in simplified form will be its reciprocal raised to the positive exponent.



**Please note that a power is simplified when it does not contain a negative exponent or an exponent on the co-efficient.**

8. **Fractional Exponent Law (Rational Exponents):** A base raised to a fractional exponent means that you will need to convert it to radical form.



**SUMMARY**

