

Law of Exponents



Description	Rule
Exponent of 0	$x^0 = 1$
Exponent of 1	$x^1 = x$
Product of same bases	$x^2 \cdot x^3 = x^{2+3} = x^5$
Quotient of same bases	$\frac{x^7}{x^5} = x^{7-5} = x^2$
Negative exponents	$x^{-2} = \frac{1}{x^2}$
Exponent to power of exponent	$(x^2)^3 = x^{2 \times 3} = x^6$
Product to an exponent	$(2x^2y)^3 = 8x^6y^3$
Quotient to an exponent	$\left(\frac{1}{2}\right)^x = \frac{1^x}{2^x}$
Fractional exponents	$\sqrt[b]{x^a} = x^{\frac{a}{b}}$

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