

**Exponent Properties Rule Table**

Rule	Example	Equation
Product of Powers	For example, $2^3 \cdot 2^4 = 2^{3+4} = 2^7$	$a^m \cdot a^n = a^{m+n}$
Quotient of Powers	For example, $\frac{5^6}{5^2} = 5^{6-2} = 5^4$	$\frac{a^m}{a^n} = a^{m-n}$
Power of a Power	For example, $(3^2)^4 = 3^{2 \cdot 4} = 3^8$	$(a^m)^n = a^{mn}$
Power of a Product	For example, $(2 \cdot 3)^3 = 2^3 \cdot 3^3$	$(ab)^n = a^n b^n$
Zero Exponent	For example, $7^0 = 1$	$a^0 = 1$