

$$a^m \cdot a^n = a^{n+m}$$

Power of a Product

$$\frac{a^m}{a^n} = a^{m-n}$$

Product of Powers

$$(a^m)^n = a^{mn}$$

Powers of a Quotient

$$(ab)^m = a^m b^m$$

Quotient of Powers

$$\left(\frac{a}{b}\right)^n = \frac{a^n}{b^n}$$

Power of a Power

$$a^m \cdot a^n = a^{n+m}$$

Power of a Product

$$\frac{a^m}{a^n} = a^{m-n}$$

Product of Powers

$$(a^m)^n = a^{mn}$$

Powers of a Quotient

$$(ab)^m = a^m b^m$$

Quotient of Powers

$$\left(\frac{a}{b}\right)^n = \frac{a^n}{b^n}$$

Power of a Power

Practice Problems:

$$\frac{x^{\square}}{x^{\square}} = x^{\square}$$

$$y^{\square} \cdot y^{\square} = y^{\square}$$

$$(x^{\square} y^{\square})^{\square} = x^{\square} y^{\square} \quad \left(\frac{a^{\square}}{b^{\square}}\right)^{\square} = \frac{a^{\square}}{b^{\square}}$$

$$\left(\frac{3x^2 y^3}{z}\right)^3 = \frac{9x^{\square} y^{\square}}{z^{\square}} \quad (7xy)(x^2 y) = 7x^{\square} y^{\square}$$

Practice Problems:

$$\frac{x^{\square}}{x^{\square}} = x^{\square}$$

$$y^{\square} \cdot y^{\square} = y^{\square}$$

$$(x^{\square} y^{\square})^{\square} = x^{\square} y^{\square} \quad \left(\frac{a^{\square}}{b^{\square}}\right)^{\square} = \frac{a^{\square}}{b^{\square}}$$

$$\left(\frac{3x^2 y^3}{z}\right)^3 = \frac{9x^{\square} y^{\square}}{z^{\square}} \quad (7xy)(x^2 y) = 7x^{\square} y^{\square}$$