

~~Basic Algebra Properties~~

Product of Powers: $3^5 \cdot 3^2 =$

Power of a Power: $(2^4)^3 = 2^{12}$

Power of a Product: $(12 \cdot 60)^{100} = 12^{100} \cdot 60^{100}$

Quotient of Powers Property: $\frac{4^7}{4^4} = 4^3$

Power of a Quotient Property: $\left(\frac{x}{y}\right)^3 = \frac{x^3}{y^3}$

Ex1. $\frac{3^{-2}}{1} = \frac{1}{3^2} = \frac{1}{9}$

Ex2. $(-7)^0 = 1$ $\frac{(-7)^2}{(-7)^2}$

Ex3. $\left(\frac{1}{5}\right)^{-2} = \frac{1^{-2}}{5^{-2}} = \frac{5^2}{1^2} = 25$

Ex4. $\frac{0^{-5}}{1} = \frac{1}{0^5} = \text{undefined}$

Ex5. $\left(\frac{2}{3}\right)^0 = 1$

Ex6. $\frac{(-8)^{-2}}{1} = \frac{1}{(-8)^2} = \frac{1}{64}$

Ex7. $\frac{1}{2^{-3}} = \frac{2^3}{1} = 2^3 = 8$

Ex8. $6^{-4} \cdot 6^4 = 6^0 = 1$

$\frac{1}{6^2 \cdot 6^2} \rightarrow \frac{6^{-2}}{6^2} = \frac{6^{-4}}{1}$

Homework:

$\frac{1}{6^4}$