

Exponent Rules:

1. Product

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

2. Quotient

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

(where $m > n$)

3. Power to a power

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

4. Product to a power

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

5. Quotient to a power

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

Exponents Worksheet

I. Find the indicated products and quotients; express results using positive integral exponents only

1. $(2xy^{-1})(3x^{-2}y^4) =$

4. $\left(\frac{2}{3}\right)^{-1} + 4^{-1} - \left(\frac{1}{4}\right)^0 =$

2. $w^{-8}w^5w^{-1} =$

5. $\left(\frac{6x^{2/3}}{7y^{2/3}}\right)^2 =$

3. $\frac{63x^2y^{-4}}{7xy^{-4}} =$

6. $-9m^5r \left(\frac{3m^{-2}t^3}{4t^6}\right)^{-3} =$