

NAME: _____

DATE: _____

PROPERTIES OF EXPONENTS



REVIEW

PRODUCT RULE

$$x^m \cdot x^n = x^{(m+n)}$$

POWER OF A POWER

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

QUOTIENT RULE

$$\frac{x^m}{x^n} = x^{(m-n)}$$

NEGATIVE EXPONENT

$$x^{-m} = \frac{1}{x^m}$$



PRACTICE

Evaluate the following using the different rules of exponents.

1 $(x^2 y^5)(x^3 y^2)$

2 $(ab^3 c^2)^4$

3 $(ab^{-3})(a^3 b^2)$

4 $(x^4)(x^{-2})^3$

5 $(3a^2 b^2)^3$

6 $(3g^{-2}h^4)(g^3)^0$

7 $\frac{2(a^3 b^2)(a^3)^2}{4ab^3}$

8 $\frac{xy^3}{2x^4 yz}$

9 $\frac{a^2 b^6}{(ab^3)^2}$

10 $\frac{(ab^4)^2}{(a^3)(a^4)}$