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. $(ab^3c^2)^4$
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. $\dfrac{2(a^3 b^2)(a^3)^2}{4ab^3}$
8. $\dfrac{xy^3}{2x^4 yz}$
9. $\dfrac{a^2b^6}{(ab^3)^2}$
10. $\dfrac{(ab^4)^2}{(a^3)(a^4)}$

LIVEWORKSHEETS