

## EXPONENT RULE GENERALIZATIONS

PRODUCT OF POWERS

$$x^a x^b = x^{a+b}$$

QUOTIENT OF POWERS

$$\frac{x^a}{x^b} = x^{a-b}$$

POWER OF POWERS

$$(x^a)^b = x^{ab}$$

NEGATIVE EXPONENT

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

ZERO EXPONENT

$$x^0 = 1$$

$$(x \neq 0)$$

$$0^0 = \text{UNDEFINED}$$