

**Section 5.1 Exponents and Scientific Notation****Product Rule for Exponents**

If  $a$  is a nonzero real number and  $m$  and  $n$  are integers, then  $a^m \bullet a^n = a^{m+n}$ .

**The Exponent 0**

If  $a$  is a nonzero real number, then  $a^0 = 1$  ( $a \neq 0$ )

**Quotient Rule for Exponents**

If  $a$  is a nonzero real number and  $m$  and  $n$  are integers, then  $\frac{a^m}{a^n} = a^{m-n}$ .