

## Exponents Laws

If  $s$ ,  $t$ ,  $a$ , and  $b$  are real numbers with  $a > 0$  and  $b > 0$

Law	Example
$a^s * a^t = a^{s+t}$	$2^3 * 2^2 = 2^5$
$(a^s)^t = a^{s*t}$	$(3^2)^3 = 3^6$
$(ab)^s = a^s * b^s$	$(5 * 2)^2 = 5^2 * 2^2$
$1^s = 1$	$1^{-10} = 1$
$a^{-s} = \frac{1}{a^s} = \left(\frac{1}{a}\right)^s$	$5^{-2} = \frac{1}{5^2} = \frac{1}{25}$
$a^0 = 1$	$1000^0 = 1$