Laws of exponents

$a^m \times a^n$	=	a^{m+n}
$a^m \div a^n$	=	a^{m-n}
$(a^m)^n$	=	a^{mn}
$(a / b)^m$	=	a^m / b^m
$(a \pm b)^m$	≠	$a^m \pm b^m$
a^{-m}	=	$1 / a^m$
$a^{m/n}$	=	$\sqrt[n]{a^m}$
1^a	=	1
a^0	=	1
0^a	=	0
0^0	→	not defined

Radicals

even root of positive number	→	postive and negative
even root of negative number	→	none
odd root of positive number	→	positive
odd root of negative number	→	negative

Operations

$a\sqrt[n]{c} \pm b\sqrt[n]{c}$	=	$(a \pm b)\sqrt[n]{c}$
$a\sqrt[n]{c} \times b\sqrt[n]{d}$	=	$(a \times b)\sqrt[n]{(c \times d)}$

Conjugate

$\sqrt[n]{a} + \sqrt[n]{b}$	→	$\sqrt[n]{a} - \sqrt[n]{b}$
$\sqrt[n]{a} - \sqrt[n]{b}$	→	$\sqrt[n]{a} + \sqrt[n]{b}$

Finding the root of $x \pm 2\sqrt{y}$

$\sqrt{((a+b) + 2\sqrt{(ab)})}$	=	$\sqrt{a} + \sqrt{b}$

Properties of logarithms

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