Свойства степеней

- $a^n a^m = a^{n+m}$
- $\dfrac{a^n}{a^m} = a^{n-m}$
- $\left(a^n\right)^m = a^{nm}$
- $\left(ab\right)^n = a^n b^n$
- $\left(\dfrac{a}{b}\right)^n = \dfrac{a^n}{b^n}$
- $a^0 = 1$, если $a \neq 0$
- $a^{-n} = \dfrac{1}{a^n}$, где $a \in R, a \neq 0$

Свойства корней

- $\sqrt[n]{a^m} = \sqrt[nk]{a^{mk}}$, $a \geq 0$
- $\sqrt[n]{a}\sqrt[n]{b} = \sqrt[n]{ab}$, $a \geq 0, b \geq 0$
- $\dfrac{\sqrt[n]{a}}{\sqrt[n]{b}} = \sqrt[n]{\dfrac{a}{b}}$, $a \geq 0, b > 0$
- $\sqrt[n]{a}\sqrt[m]{b} = \sqrt[nm]{a^m b^n}$, $a \geq 0, b \geq 0$
- $\dfrac{\sqrt[n]{a}}{\sqrt[m]{b}} = \sqrt[nm]{\dfrac{a^m}{b^n}}$, $a \geq 0, b > 0$
- $\sqrt[n]{\sqrt[m]{a}} = \sqrt[nm]{a}$, $a \geq 0$
- $\left(\sqrt[n]{a}\right)^n = a$, $a \geq 0$
- $\sqrt[2k]{a^{2k}} = \left|a\right|$, $a \geq 0$
- $\sqrt[2k+1]{a^{2k+1}} = a$