Ridicarea la putere cu exponent natural a fracțiilor ordinare pozitive

A ridica o fracție la o putere înseamnă a ridica numărătorul și numitorul la acea putere.

$$\left(\frac{a}{b}\right)^n = \underbrace{\frac{a}{b}\cdot\frac{a}{b}\cdot....\cdot\frac{a}{b}}_{n\ ori} = \frac{a^n}{b^n},\ a,\ b\in\mathbb{N},\ b\neq 0,\ n\in\mathbb{N}^*$$

Reguli de calcul cu puteri

$$\left(\frac{a}{b}\right)^m\cdot\left(\frac{a}{b}\right)^n=\left(\frac{a}{b}\right)^{m+n},\ a,\ b\in\mathbb{N}^*,\ m,\ n\in\mathbb{N}$$

$$\left(\frac{a}{b}\right)^m:\left(\frac{a}{b}\right)^n=\left(\frac{a}{b}\right)^{m-n},\ a,\ b\in\mathbb{N}^*,\ m,\ n\in\mathbb{N},\ m\geq n$$

$$\left[\left(\frac{a}{b}\right)^m\right]^n=\left(\frac{a}{b}\right)^{m\cdot n},\ a,\ b\in\mathbb{N}^*,\ m,\ n\in\mathbb{N}$$

$$\left(\frac{a}{b}\right)^n\cdot\left(\frac{c}{d}\right)^n=\left(\frac{a}{b}\cdot\frac{c}{d}\right)^n,\ a,\ b,\ c,\ d\in\mathbb{N}^*,\ n\in\mathbb{N}$$

$$\left(\frac{a}{b}\right)^0=1,\ a,\ b\in\mathbb{N}^*$$

$$\left(\frac{a}{b}\right)^1=\frac{a}{b},\ a,\ b\in\mathbb{N},\ b\neq 0.$$