POTENCE S CELIMI EKSPONENTI

Potenca je izraz oblike a^n, kjer je a poljubno naravno ali celo število. Število a imenujemo osnova, n pa stopnja ali eksponent.

PRAVILA:

1. $\boldsymbol{a^m \cdot a^n = a^{m+n}}$
   $primer$: $2^3 \cdot 2^4 = 2^{3+4} = 2^7$=128

2. $\boldsymbol{(a^m)^n = a^{m \cdot n}}$
   $primer$: $(2^3)^4 = 2^{3 \cdot 4} = 2^{12} = 4096$

3. $\boldsymbol{a^n \cdot b^n = (a \cdot b)^n}$
   $primer$: $3^2 \cdot 4^2 = (3 \cdot 4)^2 = 12^2 = 144$

4. $\boldsymbol{a^{-1} = \frac{1}{a}}$
   $primer$: $3^{-1} = \frac{1}{3}$

5. $\boldsymbol{a^{-n} = \frac{1}{a^n}}$
   $primer$: $2^{-3} = \frac{1}{2^3} = \frac{1}{8}$

6. $\boldsymbol{\frac{a^m}{a^n} = a^{m-n}}$
   $primer$: $\frac{2^5}{2^3} = 2^{5-3} = 2^2 = 4$

7. $\boldsymbol{\left(\frac{a}{b}\right)^{-1} = \frac{b}{a}}$
   $primer$: $\left(\frac{3}{4}\right)^{-1} = \frac{4}{3} = 1\frac{1}{3}$

8. $\boldsymbol{\frac{a^n}{b^n} = \left(\frac{a}{b}\right)^n}$
   $primer$: $\frac{10^2}{5^2} = \left(\frac{10}{5}\right)^2 = 2^2 = 4$

9. $\boldsymbol{a^0 = 1}$

$primer: 3^0 = 1$

10. $\boldsymbol{(-1)^{sodo\ št.} = 1}$

$primer: (-1)^6 = 1$

11. $\boldsymbol{(-1)^{liho\ št.} = -1}$

$primer: (-1)^5 = -1$

VAJE:

$3^2 \cdot 3^4 =$

$5^2 \cdot 5^3 \cdot 5 =$

$(2^3)^2 =$

$5^2 \cdot 3^2 =$

$7^{-1} =$

$4^{-3} =$

$\frac{3^7}{3^3} =$

$\left(\frac{4}{7}\right)^{-1} =$

$\frac{25^2}{5^2} =$

$27^0 =$

$(-1)^{12} =$

$(-1)^9 =$

$(-2)^3 =$

$(-2)^4 =$

$-2^4 =$

$\left(\frac{2}{3}\right)^3 =$

$\left(-\frac{2}{3}\right)^3 =$

$\left(-\frac{2}{3}\right)^4 =$

$\frac{2}{3}^3 =$

$-\frac{2^3}{3} =$

$-\frac{2^4}{3} =$

$-215^0 =$

$5^{-4} =$

$\left(\frac{2}{3}\right)^{-3} =$

$\left(\frac{1}{4}\right)^4 =$

$\left(-\frac{1}{2}\right)^{-5} =$

$\frac{1}{4}^4 =$

$2^5 \cdot 2^3 \cdot 2^{-6} \cdot 2 =$

$2^7 \cdot 2^3 \cdot 2^{-6} : 2^4 : 2^{-3} =$

$2^5 \cdot 2^3 \cdot 2^{-6} \cdot 16 =$

$\frac{3^8 \cdot 3^{-5}}{3^{-4} : 3^{-6}} =$

$x^5 \cdot x^6 \cdot x^{-3} =$

$x^5 : x^6 \cdot x^{-3} : x^{-2} =$

$((x)^4)^3 =$