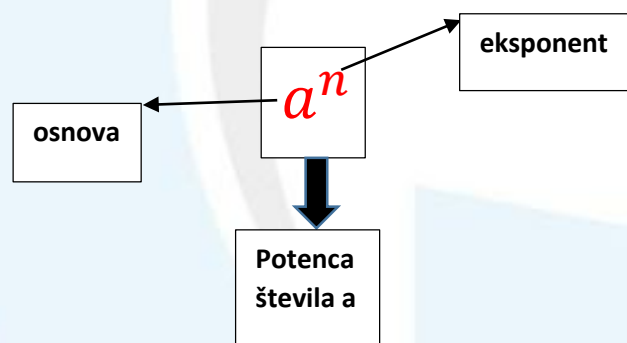


POTENCE IN KORENI

I. POTENCE



a.) Ničla v eksponentu:

$$a^0 = 1$$

1. Izračunaj potence:

$$7^0 =$$

$$\left(\frac{2}{3}\right)^0 =$$

$$(-7)^0 =$$

$$-7^0 =$$

b.) Minus v eksponentu:

$$a^{-n} = \frac{1}{a^n}$$

2. Izračunaj potence:

$$7^{-2} =$$

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

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

PRAVILA:

a.) ENAKE OSNOVE

$$a^n \cdot a^m = a^{n+m}$$

$$\frac{a^n}{a^m} = a^{n-m}$$

$$(a^n)^m = a^{n \cdot m}$$

3. Izračunaj potence:

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

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

$$\frac{5^7}{5^5} =$$

$$2^8 : 2^5 =$$

$$2^4 \cdot 2^5 : 2^3 \cdot 2 : 2^{-6} : 2^7 : 8 =$$

$$(2^3)^2 =$$

$$(2^3)^{-2} =$$

b.) ENAK EKSPONENT

$$a^n \cdot b^n = (a \cdot b)^n$$

$$\frac{a^n}{b^n} = \left(\frac{a}{b}\right)^n$$

4. Izračunaj potenci:

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

$$\frac{15^3}{5^3} =$$

5. Skrči izraz in izračunaj

$$(2^{n+2})^{n-2} \cdot 2^{(n-1)^2} : 4^{n \cdot (n-1)} =$$

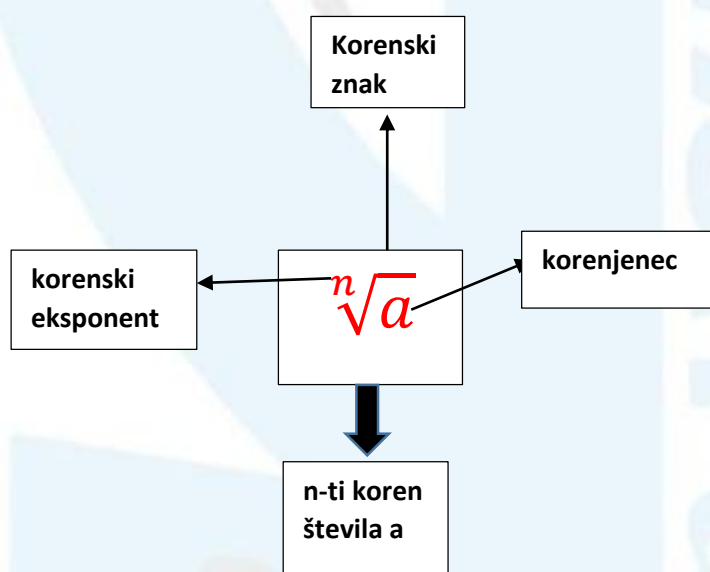
6. Poenostavi izraz

$$\left(\frac{2 \cdot a^7 \cdot b^{-8} \cdot c^3}{a^{-2} \cdot b^{-4}}\right)^{-3} \cdot \left(\frac{a^{-3} \cdot b^3}{2 \cdot a^4 \cdot c^2}\right)^{-4} =$$

7. Izpostavi skupni faktor

$$3^{x+3} - 8 \cdot 3^{x+1} - 6 \cdot 3^{x-1} =$$

I. KORENI



a.) KVADRATNI KOREN

$$(\sqrt{a})^2 = \sqrt{a^2} = a \quad \longrightarrow \quad \sqrt{a} \cdot \sqrt{a} = a$$

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}$$

$$\sqrt{\frac{a}{b}} = \frac{\sqrt{a}}{\sqrt{b}}$$

8. Izračunaj

$$(\sqrt{25})^2 =$$

$$\sqrt{81 \cdot 36} =$$

$$\sqrt{\frac{100}{64}} =$$

$$\sqrt{12\frac{1}{4}} =$$

$$\sqrt{\frac{56}{27}} \cdot \sqrt{\frac{21}{2}} =$$

9. Delno koreni

$$\sqrt{50} =$$

$$\sqrt{\frac{125}{16}} =$$

10. Racionaliziraj imenoalec

$$\frac{\sqrt{8} - 2}{\sqrt{2}} =$$

$$\frac{\sqrt{5}}{\sqrt{5} + 1} =$$

b.) KORENI POLJUBNIH STOPENJ

$$\sqrt[n]{a} \cdot \sqrt[n]{b} = \sqrt[n]{a \cdot b}$$

$$\sqrt[n]{a} : \sqrt[n]{b} = \sqrt[n]{a : b}$$

$$(\sqrt[m]{a})^n = \sqrt[m]{a^n} \quad \longrightarrow \quad \sqrt[m]{a^n} = a^{\frac{n}{m}}$$

$$\sqrt[m]{\sqrt[n]{a}} = \sqrt[m \cdot n]{a}$$

11. Izračunaj

$$\sqrt[3]{4} \cdot \sqrt[3]{16} =$$

$$\sqrt[5]{192} : \sqrt[5]{6} =$$

12. Poenostavi

$$\sqrt[3]{27 \cdot a^{15} \cdot b^{-12}} =$$

$$\sqrt[5]{x^{-3} \cdot y^6} \cdot \sqrt[5]{x^{-2} \cdot y^4} =$$

$$\sqrt[5]{x^6 \cdot \sqrt[3]{x^{12}}} =$$

$$\frac{\sqrt[3]{(x^2 \cdot y)^5} \cdot \sqrt{x \cdot y^5}}{\sqrt[6]{(x^5 \cdot y)^{-5}}} =$$

13. Izračunaj

$$\sqrt{12 \cdot \left(\frac{1}{27}\right)^{-\frac{1}{3}} - 5 \cdot \left(\frac{1}{32}\right)^{-\frac{2}{5}}} = \sqrt{12 \cdot \left(\frac{27}{1}\right)^{\frac{1}{3}} - 5 \cdot \left(\frac{32}{1}\right)^{\frac{2}{5}}} =$$