

PIERWIASTKI

1. Oblicz pierwiastki według zrobionych przykładów

$$\sqrt{25} = 5, \quad \text{bo} \quad 5^2 = 25$$

$$\sqrt{49} =$$

$$\sqrt{16} =$$

$$\sqrt{36} =$$

$$\sqrt{64} =$$

$$\sqrt{100} =$$

$$\sqrt{225} =$$

$$\sqrt{81} =$$

$$\sqrt{144} =$$

$$\sqrt[3]{8} = 2, \quad \text{bo} \quad 2^3 = 8$$

$$\sqrt[3]{27} =$$

$$\sqrt[3]{125} =$$

$$\sqrt[3]{64} =$$

$$\sqrt[3]{216} =$$

2. Wylącz czynnik przed pierwiastek według przykładu:

$$\sqrt{12} = \sqrt{4 \cdot 3} = \sqrt{4} \cdot \sqrt{3} = 2\sqrt{3}$$

$$\sqrt{18} =$$

$$\sqrt{50} =$$

$$\sqrt{28} =$$

$$\sqrt{8} =$$

3. Oblicz:

$$\sqrt{\frac{4}{9}} = \frac{\sqrt{4}}{\sqrt{9}} = \frac{2}{3}$$

$$\sqrt{\frac{16}{25}} =$$

$$\sqrt{0,04} =$$

$$\sqrt{1\frac{7}{9}} =$$

$$\sqrt{\frac{100}{121}} =$$

POTĘGI

ZAD.1. Zapisz w postaci iloczynu

$$\left(2\frac{2}{5}\right)^4 = \left(\frac{12}{5}\right)^4 = \frac{12}{5} \cdot \frac{12}{5} \cdot \frac{12}{5} \cdot \frac{12}{5}$$

$$2^3 =$$

$$\left(\frac{1}{3}\right)^7 =$$

$$\left(1\frac{1}{2}\right)^3 =$$

ZAD.2. Zapisz iloczyn w postaci potęgi :

$$\frac{1}{5} \cdot \frac{1}{5} \cdot \frac{1}{5} \cdot \frac{1}{5} = \left(\frac{1}{5}\right)^4$$

$$2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 =$$

$$1\frac{1}{8} \cdot 1\frac{1}{8} \cdot 1\frac{1}{8} =$$

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

ZAD.3 Oblicz

$$(-2)^4 = (-2) \cdot (-2) \cdot (-2) \cdot (-2) = 16$$

$$10^5 =$$

$$\left(\frac{1}{4}\right)^2 =$$

$$(0,6)^2 =$$

$$2^3 =$$

ZAD. 4 Przedstaw w postaci potęgi jednej liczby, korzystając ze wzorów:

$$\begin{aligned} a^m \cdot a^n &= a^{m+n} \\ a^m : a^n &= a^{m-n} \\ (a^m)^n &= a^{n \cdot m} \end{aligned}$$

$$a^2 \cdot a^5 =$$

$$m^7 : m^3 =$$

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

$$x^5 \cdot x^3 =$$

$$\frac{y^6}{y^4} =$$

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

$$\frac{(a^9 : a^5)^2}{a^4 \cdot a} =$$

$$x^7 : x^2 =$$

$$a^3 \cdot a^8 =$$

$$(y^4)^2 =$$

$$\left(\frac{z^5}{z}\right)^3 =$$