

Test $1^\circ (5-\sqrt{3})^2 = 5^2 - 2 \cdot 5 \cdot \sqrt{3} + (\sqrt{3})^2 = 25 - 10\sqrt{3} + 3 = 28 - 10\sqrt{3} \%$

$2^\circ 5 - \sqrt{3} > 5 - \sqrt{25} = 5 - 5 = 0 \%$

$1^\circ \text{ \& } 2^\circ \Rightarrow$ wärte

b) Wärte $\sqrt{5-2\sqrt{6}} = \sqrt{3}-\sqrt{2}$

Test $1^\circ (\sqrt{3}-\sqrt{2})^2 = (\sqrt{3})^2 - 2 \cdot \sqrt{3} \cdot \sqrt{2} + (\sqrt{2})^2 = 3 - 2\sqrt{6} + 2 = 5 - 2\sqrt{6}$

$2^\circ \sqrt{3} - \sqrt{2} > 0 \%$

$1^\circ \text{ \& } 2^\circ \Rightarrow$ wärte

16.17 $\sqrt{3} \approx 1,732$

a) $\sqrt{300} = \sqrt{3 \cdot 100} = \sqrt{3} \cdot \sqrt{100} = 10\sqrt{3} \approx 10 \cdot 1,732 = 17,32$

b) $\sqrt{30000} = \sqrt{3 \cdot 10000} = \sqrt{3} \cdot \sqrt{10000} = \sqrt{3} \cdot 100 \approx 1,732 \cdot 100 = 173,2$

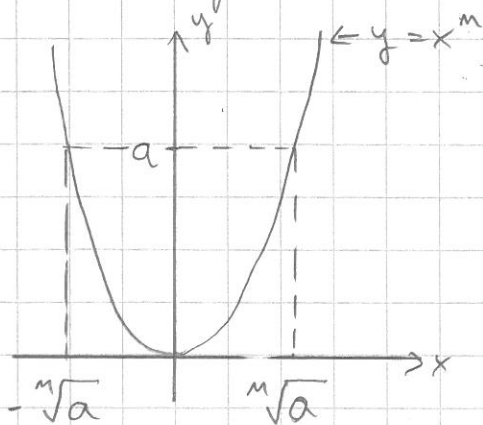
c) $\sqrt{0,03} = \sqrt{3 \cdot 0,01} = \sqrt{3} \cdot \sqrt{0,01} = \sqrt{3} \cdot \sqrt{\frac{1}{100}} = \sqrt{3} \cdot \frac{\sqrt{1}}{\sqrt{100}}$

$= \sqrt{3} \cdot \frac{1}{10} = \frac{\sqrt{3}}{10} \approx \frac{1,732}{10} = 0,1732$

7. Kurzsumme gewöl

Potenzgleichung $x^m = a$ reell

$1^\circ m = 2k$ geradz

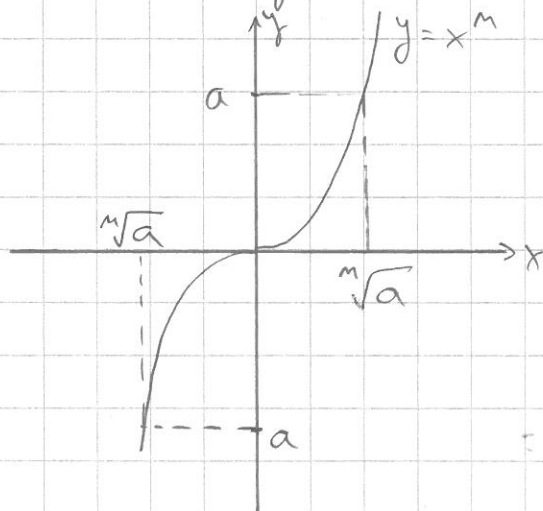


$a > 0: x = \pm \sqrt{a}$

$a = 0: x = 0$

$a < 0: \text{w. rats.}$

$2^\circ m = 2k + 1$ geradz



$x = \sqrt[m]{a}$ (ainsi yfiri jiwiri)

Exm a) $2x^4 - 162 = 0 \Leftrightarrow 2x^4 = 162 \quad | :2 \Leftrightarrow x^4 = 81 \quad | \sqrt[4]{\quad}$

$\Leftrightarrow x = \pm \sqrt[4]{81} = \pm 3$

b) $4x^7 + 512 = 0 \Leftrightarrow 4x^7 = -512 \quad | :4 \Leftrightarrow x^7 = -128 \quad | \sqrt[7]{\quad} \Leftrightarrow x = \sqrt[7]{-128} = -2$

c) $5x^6 + 7 = 0 \Leftrightarrow 5x^6 = -7 \quad | :5 \Leftrightarrow x^6 = -\frac{7}{5} \quad \downarrow \text{w. rats.}$