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$$w = \sqrt[5]{\underbrace{78 - 6\sqrt{3}i}_z}$$

Länge Berechnen: R

$$z = 78 - 6\sqrt{3}i$$

$$R = |z| = \sqrt{78^2 + (6\sqrt{3})^2}$$

$$R = \sqrt{324 + 108}$$

$$R = \sqrt{432}$$

Winkel:

$$\varphi = \arctan\left(\frac{b}{a}\right) = \arctan\left(-\frac{6\sqrt{3}}{78}\right)$$

$$\varphi = \arctan\left(-\frac{\sqrt{3}}{3}\right) = \arctan\left(-\frac{\sqrt{3}}{\sqrt{3} \cdot \sqrt{3}}\right) =$$

$$= \arctan\left(-\frac{1}{\sqrt{3}}\right) = -\frac{\pi}{6}$$

Formel einsetzen:

$$w_0 = \left[\sqrt[10]{432}, -\frac{\pi}{6} + \frac{2\pi \cdot 0}{5} \right]$$

$$w_0 = \left[\sqrt[10]{432}, -\frac{\pi}{30} \right]$$

$$w_1 = \left[\sqrt[10]{432}, -\frac{\pi}{30} + \frac{2\pi \cdot 6}{5 \cdot 6} \right]$$

$$\frac{2\pi \cdot 6}{5 \cdot 6} = \frac{12\pi}{30}$$

$$w_1 = \left[\sqrt[10]{432}, \frac{11\pi}{30} \right]$$

$$w_2 = \left[\sqrt[10]{432}, -\frac{\pi}{30} + \frac{2\pi \cdot 2 \cdot 6}{30} \right] = \left[\sqrt[10]{432}, \frac{23\pi}{30} \right]$$

$$w_3 = \left[\sqrt[10]{432}, -\frac{\pi}{30} + \frac{12\pi \cdot 3}{30} \right] = \left[\sqrt[10]{432}, \frac{35\pi}{30} \right]$$

$$w_4 = \left[\sqrt[10]{432}, -\frac{\pi}{30} + \frac{12\pi \cdot 4}{30} \right] = \left[\sqrt[10]{432}, \frac{47\pi}{30} \right]$$