

$$Z = -\sqrt{3} + 1$$

$$a = -\sqrt{3} \quad b = 1 \quad \vartheta = \frac{-\sqrt{3}}{2} = \frac{\pi}{6}$$

$$|h| = \sqrt{(-\sqrt{3})^2 + 1^2} = \sqrt{4} = 2$$

$$Z = 2 e^{j\pi/6} \quad \sqrt[3]{2} = \sqrt[3]{2}$$

$$w_0 = \sqrt[3]{2} e^{j\pi/18}$$

$$w_1 = \sqrt[3]{2} e^{j(\frac{\pi}{18} + \frac{2\pi}{3})}$$

$$w_1 = \sqrt[3]{2} e^{j\frac{13\pi}{18}}$$

$$w_2 = \sqrt[3]{2} e^{j\frac{25\pi}{18}}$$

Polarform

$$w_0 = \sqrt[3]{2} \left(\cos \frac{\pi}{18} + j \sin \frac{\pi}{18} \right) = \sqrt[3]{2} (0,98 + 0,17j) = 1,23 + 0,21j$$

$$w_1 = \sqrt[3]{2} \left(\cos \frac{13\pi}{18} + j \sin \frac{13\pi}{18} \right) = \sqrt[3]{2} (-0,64 + 0,77j) = -0,8 + 0,97j$$

$$w_2 = \sqrt[3]{2} \left(\cos \frac{25\pi}{18} + j \sin \frac{25\pi}{18} \right) = \sqrt[3]{2} (-0,34 - 0,93j) = -0,43 - 0,93j$$