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Studierichting: Informatica
Oefeningenreeks 1C nr. 48.1

$$z^6 = 1$$

$$\begin{cases} r = \sqrt{1^2 + 0^2} = 1 \\ \tan\theta = 0 \end{cases}$$

$$\Rightarrow w_0 = 1$$

$$\Rightarrow w_1 = \operatorname{cis}\left(\frac{\pi}{3}\right) = \frac{1}{2} + \frac{i\sqrt{3}}{2}$$

$$\Rightarrow w_2 = \operatorname{cis}\left(\frac{2\pi}{3}\right) = -\frac{1}{2} + \frac{i\sqrt{3}}{2}$$

$$\Rightarrow w_3 = \operatorname{cis}(\pi) = -1$$

$$\Rightarrow w_4 = \operatorname{cis}\left(\frac{4\pi}{3}\right) = -\frac{1}{2} - \frac{i\sqrt{3}}{2}$$

$$\Rightarrow w_5 = \operatorname{cis}\left(\frac{5\pi}{3}\right) = \frac{1}{2} - \frac{i\sqrt{3}}{2}$$

References