

Exercise 5:

$$1) Z^5 = 1 \Rightarrow Z_k = e^{\frac{2i k \pi}{5}}$$

$$k \in \{0, 1, \dots, n-1\} \Rightarrow k \in \{0, 1, 2, 3, 4\}$$

$$Z_0 = e^{\frac{2i 0 \pi}{5}} = e^0 = 1$$

$$Z_1 = e^{\frac{2i 1 \pi}{5}} = e^{\frac{2i \pi}{5}}$$

$$Z_2 = e^{\frac{2i 2 \pi}{5}} = e^{\frac{4i \pi}{5}}$$

$$Z_3 = e^{\frac{2i 3 \pi}{5}} = e^{\frac{6i \pi}{5}}$$

$$Z_4 = e^{\frac{2i 4 \pi}{5}} = e^{\frac{8i \pi}{5}}$$

