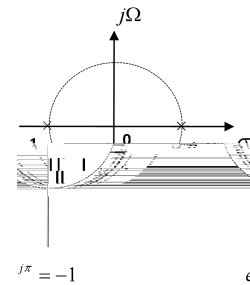


$$s_k = \varepsilon^{-\frac{j(k+N-)\pi}{N}} \Omega_c e^{\frac{j(k+N-)\pi}{N}} \quad k = N -$$

$$s_k = e^{\frac{j(k+N-)\pi}{N}} = e^{\frac{j(k)\pi}{N}} = e^{jk\pi} \quad k =$$

$$s = e^{j\pi} = -$$

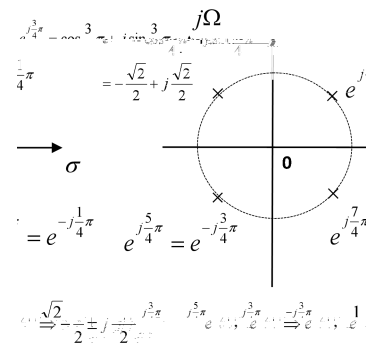
一阶: N=1



二阶: N=2

$$s_k = e^{\frac{j(k+N-)\pi}{N}} = e^{\frac{j(k+)\pi}{N}} \quad k =$$

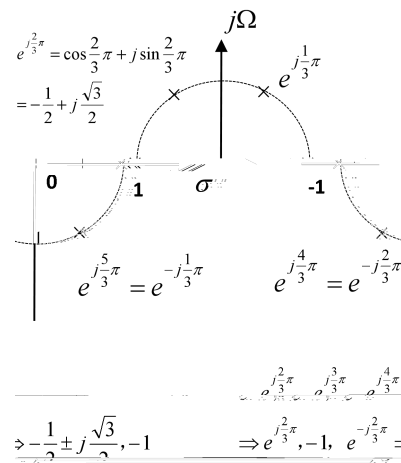
$$s = e^{\frac{j\pi}{2}} \quad s = s^* = e^{-\frac{j\pi}{2}} = e^{-\frac{j\pi}{2}}$$



三阶: N=3

$$s_k = e^{\frac{j(k+N-)\pi}{N}} = e^{\frac{j(k+)\pi}{N}} = e^{\frac{j(k+)\pi}{3}} \quad k =$$

$$s = e^{\frac{j\pi}{3}} \quad s = e^{j\pi} = - \quad s = s^* = e^{-\frac{j\pi}{3}} = e^{-\frac{j\pi}{3}}$$



$$s_k = e^{\frac{j(k+N-)\pi}{N}} = e^{\frac{j(k+)\pi}{N}} \quad k =$$

$$s = e^{\frac{j\pi}{N}} \quad s = e^{\frac{j\pi}{N}}$$

$$s = s^* = e^{\frac{j\pi}{N}} = e^{-\frac{j\pi}{N}}$$

$$s = s^* = e^{\frac{j\pi}{N}} = e^{-\frac{j\pi}{N}}$$

$$s_k = e^{\frac{j(k+N-)\pi}{N}} = e^{\frac{j(k+)\pi}{N}} = e^{\frac{j(k+)\pi}{N}} \quad k =$$

$$s = e^{\frac{j\pi}{N}} \quad s = e^{\frac{j\pi}{N}} \quad s = e^{j\pi} = -$$

$$s = s^* = e^{\frac{j\pi}{N}} = e^{-\frac{j\pi}{N}}$$

$$s = s^* = e^{\frac{j\pi}{N}} = e^{-\frac{j\pi}{N}}$$

$$s_k = e^{\frac{j(k+N-)\pi}{N}} = e^{\frac{j(k+)\pi}{N}} \quad k =$$

$$\frac{\pi}{N} \quad \frac{\pi}{N} \quad \frac{\pi}{N}$$

$$\frac{\pi}{N} \quad \frac{\pi}{N}$$

$$\frac{\pi}{N} \quad \frac{\pi}{N}$$

$$\frac{\pi}{N} \quad \frac{\pi}{N}$$