
EXERCISE 9.7: For the M^{th} -order FIR filter whose impulse response is

$$h[n] = \sum_{k=0}^M a^k \delta[n - k] \quad (9.1)$$

the system function in (9.37) or (9.40) has zeros off the unit circle when $a \neq 1$. From the pole-zero plot of $H(z)$ shown in Fig. 9-14, determine the value of a and also the filter length L .

