EXERCISE 9.7: For the *M*th-order FIR filter whose impulse response is

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

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