

PROBLEM:

For each of the following systems (specified by either an $H(z)$ or a difference equation), determine all the poles and zeros and make a pole-zero plot.

(a) $\mathcal{S}_a :$ $y[n] = x[n] + x[n - 2] + x[n - 4]$

(b) $\mathcal{S}_b :$ $H(z) = \frac{1 + 2z^{-1} + z^{-2}}{1 - 0.6z^{-1} + 0.81z^{-2}}$

(c) $\mathcal{S}_c :$ $y[n] = 0.88y[n - 2] + 2x[n - 1] + 3x[n - 2]$