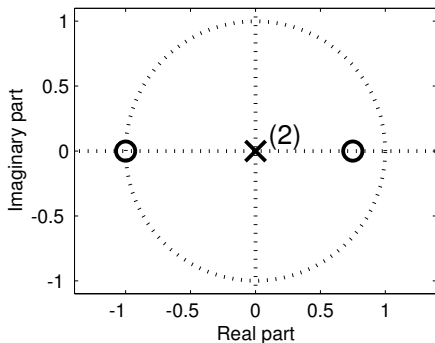
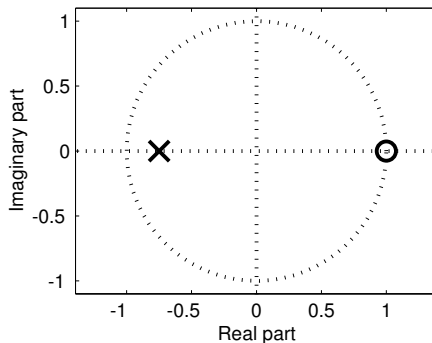
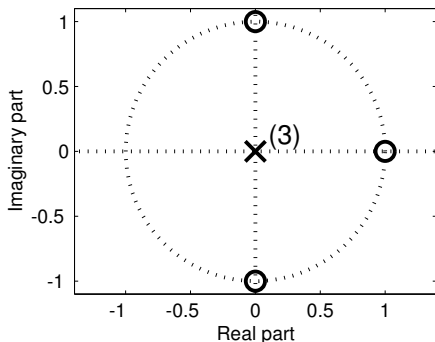
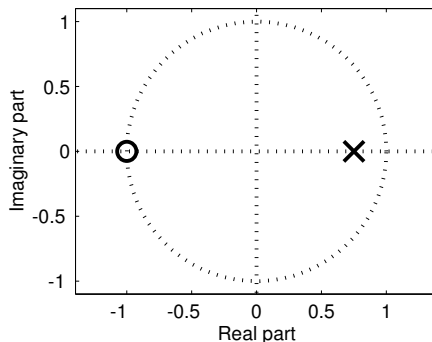


PROBLEM:**Pole-Zero Plot #1****Pole-Zero Plot #2****Pole-Zero Plot #3****Pole-Zero Plot #4**

For each of the Pole-zero plots plots (1–4), determine the difference equation that defines the system.

1: **2:** **3:** **4:**

$$\mathcal{S}_1: y[n] = 0.4y[n-1] + x[n] + x[n-1]$$

$$\mathcal{S}_2: y[n] = 0.75y[n-1] + x[n] + x[n-1]$$

$$\mathcal{S}_3: y[n] = -0.75y[n-1] + x[n] - x[n-1]$$

$$\mathcal{S}_4: y[n] = 0.75y[n-1] + x[n] - x[n-1]$$

$$\mathcal{S}_5: y[n] = x[n] - x[n-1] + x[n-2]$$

$$\mathcal{S}_6: y[n] = x[n] - x[n-1] + x[n-2] - x[n-3]$$

$$\mathcal{S}_7: y[n] = x[n] + \frac{1}{4}x[n-1] - \frac{3}{4}x[n-2]$$

$$\mathcal{S}_8: y[n] = \frac{1}{3}x[n] - x[n-1] + x[n-2] - \frac{1}{3}x[n-3]$$