Special Problem 4.2 – 4
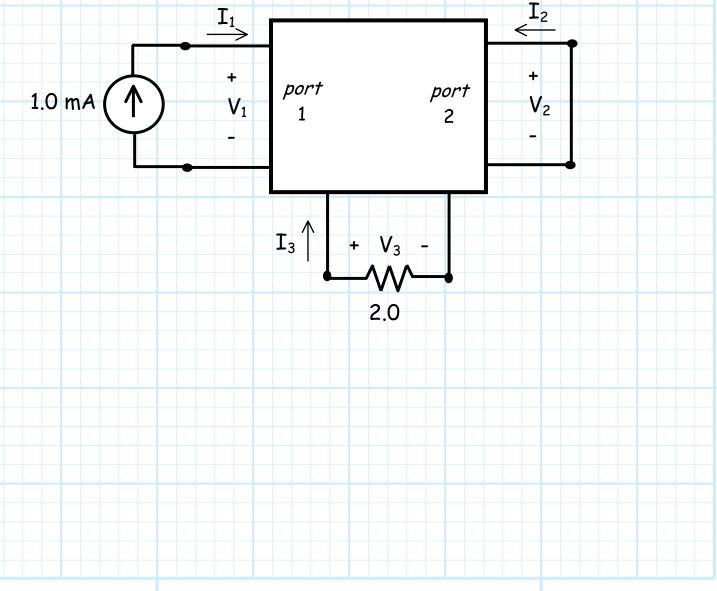
The 3-port network below has the impedance matrix:

$$\overline{\overline{Z}} = \begin{bmatrix} 1 & j & 1 \\ j & 2 & 2 \\ 1 & 2 & 3 \end{bmatrix}$$

For the circuit below, determine all three voltages and all three currents.