

Special Problem 4.3-2

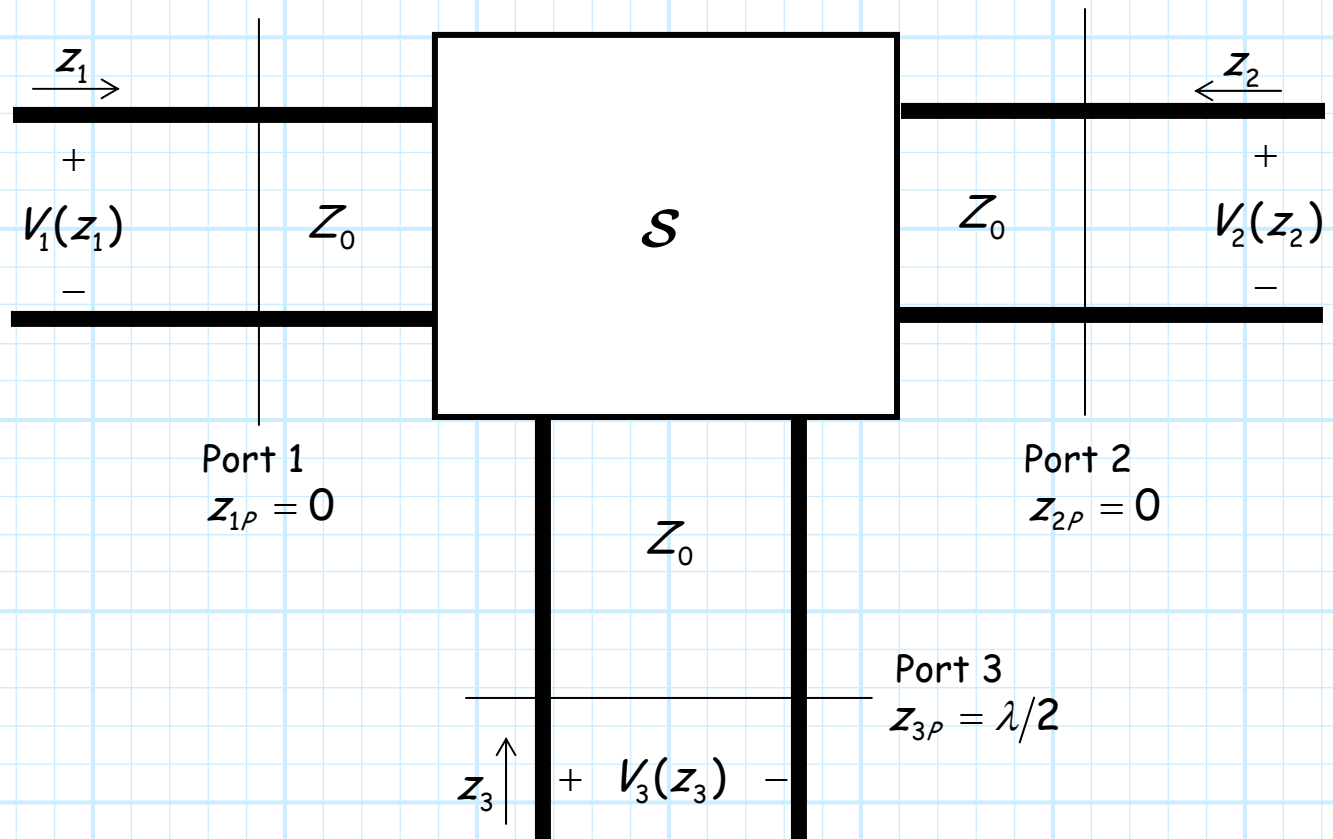
The **voltage** along each of the **three** transmission lines below is:

$$V_1(z_1) = 2 e^{-j\beta z_1} - e^{j\beta z_1}$$

$$V_2(z_2) = j0.5 e^{j\beta z_2}$$

$$V_3(z_3) = 0.25 e^{j\beta z_3}$$

Determine scattering parameters S_{11} , S_{21} , and S_{31} .



Note the location of port 3 (i.e., $z_{3p} = \lambda/2$)!