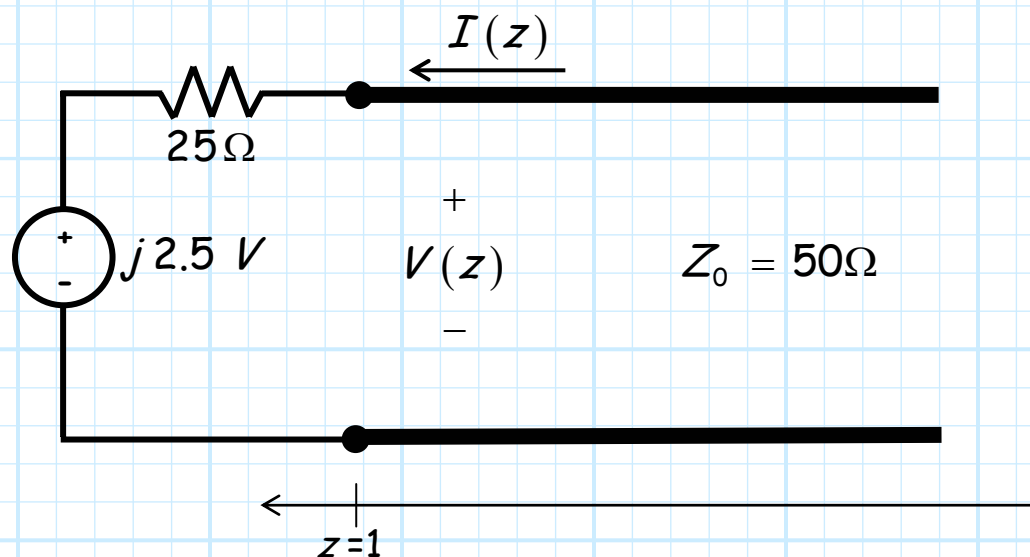


Special Problem 2.6-9

Carefully consider the circuit below:



It is known that the **current** along the transmission line is:

$$I(z) = 0.02 e^{-j\beta z} - B e^{+j\beta z} \text{ Amps for } z \leq 1$$

where B is some unknown complex value, and $\beta = \pi/2$.

Determine the value of B .

Hint: Carefully consider the **direction of increasing z** , as well as the **location** denoting the beginning of the transmission line (i.e. $z=1$).