Special Problem 2.1-2

The current and voltage along a transmission line are described by functions $I(z)$ and $V(z)$, respectively.

The transmission line has $\beta = \pi/2$ (radians/m).

We know that:

$$V(z = 0) = 1.0 \, V$$

$$V(z = 1) = -j3.0 \, V$$

$$I(z = 0) = 0.03 \, A$$

Determine the functions $I(z)$ and $V(z)$. 