

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:

$$V(z = 0) = 1.0 \text{ V}$$

$$V(z = 1) = -j3.0 \text{ V}$$

$$I(z = 0) = 0.03 \text{ A}$$

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