

### Special Problem 2.6-13

In the circuit below, the load  $Z_L$  is **unknown**!

However, we **do** know that the voltage on the transmission line has the form:

$$V(z) = Ae^{-j\beta z} + e^{+j\beta z}$$

1. Determine the value of constant  $A$ .
2. Determine the load impedance  $Z_L$  in terms of  $\beta$  (do not attempt to determine the value of  $\beta$ !).

Hint:  $V(z=0) \neq 4.5V$

