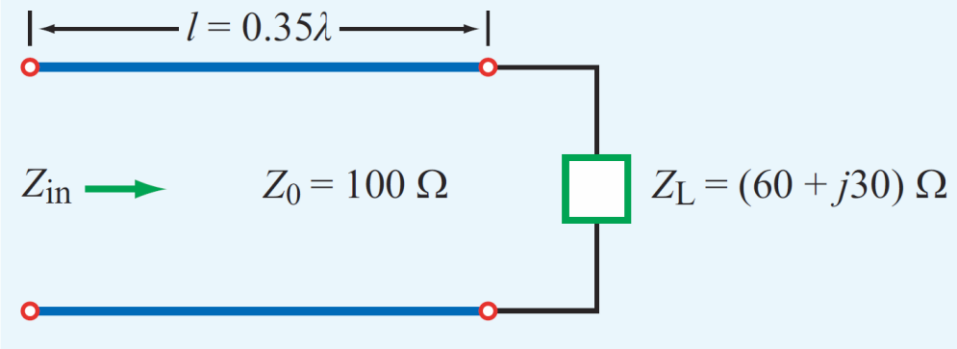
HW7 due to 11/23 (submit online at NTUCOOL before 9 am)

1. (a)(problem 2.28) A lossless transmission line of electrical length $l = 0.35\lambda$ is terminated in a load impedance shown in the figure. Find physical length of the transmission line, the reflection at the load, and input impedance. Use ADS to verify your results. The frequency range is from 1 GHz to 10 GHz and the electrical length corresponds to 5 GHz.



2. (problem 2.39) A 75 Ω resistive load is preceded by a λ/4 section of a 50 Ω lossless line, which itself is preceded by another λ/4 section of a 100 Ω line. What is the input impedance? Use ADS to verify your results. The frequency range is from 1 GHz to 10 GHz and the electrical length corresponds to 5 GHz.