

Name:

Homework 11, due Monday 10/07/2013

Please use the Smith Chart to answer the following questions. Please submit the Smith Chart showing your solution drawings with your homework.

1. Find $\Gamma = 0.5e^{j\pi/4}$
2. Find $\Gamma = 0.6-j0.3$
3. If the reflection coefficient at the load is $\Gamma = 0.6-j0.3$, what is the normalized load impedance z_L ?
4. What is the input impedance of a transmission line of length $\lambda/3$ terminated with a normalized load of $z_L = 2.25-j2.2$?
5. What is the SWR in a transmission line terminated with a normalized load of $z_L = 2.25-j2.2$?
6. If the reflection coefficient at the load is $\Gamma = 0.5e^{j135^\circ}$, what is the reflection coefficient at distance of $\lambda/3$ away from the load?
7. If the reflection coefficient at the load is $\Gamma = 0.5e^{j135^\circ}$: What is the input impedance at distance of $\lambda/3$ away from the load? What is SWR?
8. If the reflection coefficient at the load is $\Gamma = 5e^{j135^\circ}$, at what distance from the load the voltage is maximum? What is the value of Γ at this point? Note: This location is also where the current is minimum.
9. If the reflection coefficient at the load is $\Gamma = 5e^{j135^\circ}$, at what distance from the load the voltage is minimum? What is the value of Γ at this point? Note: This location is also where the current is maximum.