

Problem Session # 2

1. A thin dipole is $\lambda/15$ long and has loss resistance of 1.5Ω . Find:
 - a. The maximum directivity
 - b. The radiation resistance
 - c. The input resistance
 - d. The gain
 - e. The maximum effective aperture
 - f. The beam solid angle

2. Calculate and plot the far field pattern of a thin center-fed 2.5λ dipole antenna. Assume sinusoidal current distribution along the dipole. Sketch the pattern in both linear and polar forms.

3. Problem 4.15 of your textbook.

4. Problem 4.19 of your textbook.

5. Problem 4.20 of your textbook

6. Problem 4.37 of your textbook.