ECEn 360
Lines and Fields
Homework #9

Text: Problem 8.26
Text: Problem 8.28
Text: Problem 8.29
Text: Problem 8.30
Text: Problem 8.33

A microwave beam is incident from air onto a fresh water lake at an angle of 45º measure relative to the surface normal. The microwave beam has a power of 3W, right hand circular polarization, and a frequency of f=1GHz. For a water use ε_r=80 and σ=0 (see Tables B-1 and B2 in the book).
(a) What is the power of the reflected beam?
(b) What is the polarization state of the reflected beam?
(c) At what incident angle would the reflected beam be linearly polarized?