HW2 Advanced Composites due March 14, 2013

Using Mathematica as an example solve bending problem of a composite plate 20 inch long 10 inch wide under distributed uniform load q , knowing that the plate lamination is [0, 45,-45,90,0]. Find max q that this plate can resist without any failure. Plot stresses through the thickness at x where w is max, knowing that the plate is fixed at x=0 and simply supported at x=20in.

Use material properties from Mathematica worksheet. Use both methods CLPT(classical laminated plate theory) and FSDT(First order shear deformation theory) as in the workseet.