BOUNDARY LAYERS

6.1) Using Blasius's results for laminar flow past a flat plate, plot the shear stress distribution as a function of η.

6.2) Determine the distance downstream from the bow of a ship moving at 7.59 knots relative to still water at which the boundary layer becomes turbulent. Assume a critical Reynolds number of $R_c = 5 \times 10^5$. Also, determine the boundary layer thickness at this point and the total friction drag coefficient for this portion of the surface. Assume the kinematic viscocity of water be $1.21 \times 10^{-5} ft^2/s$.