Problem 241A

Using the graph below find expressions for the laminar boundary layer thickness, $\delta_{0.99}$ (defined as the distance from the wall at which the velocity has reached 99% of the velocity outside the boundary layer) for the flow past wedges of half-angle $\pi/10$, $\pi/4$ and $\pi/2$ (the last being a flat plate normal to the on-coming stream) in terms of the distance x measured along the surface from the vertex, the kinematic viscosity, ν, and the constant, C, which describes the velocity external to the boundary layer through the formula $U = Cx^m$.