Consider 2D incompressible flow over a flat plate at high Reynolds number. Use a similarity variable to solve for the velocity (u and v) across the boundary layer. Show the following:

(a) The similarity solution satisfies the continuity equation. (5)

(b) Plot the velocity (u and v) with respect to the similarity variable. (10)

(c) Evaluate and plot the velocity (u and v) profile at x = 2 and 5. (10)

(d) Evaluate the skin friction coefficient at x = 2 and 5. Hence, calculate the friction drag on one side of the plate of length l = 1. (10)

(e) Evaluate the BL thickness, BL displacement thickness and momentum thickness at x = 2 and 5. (15)

**Your Submission:**

Due Date Exceeded.
As per our records you have not submitted this assignment.