Computational Fluid Dynamics (AE/ME 339)
MAEEM Dept., UMR, Fall 2001

Home Work Problem 13

Suppose that a finite difference solution for the temperature distribution T has been obtained and are given at the nodes in the neighborhood of the wall as shown in the figure. It would be desirable to evaluate the temperature at the boundary itself. Assuming that the wall is an adiabatic boundary, calculate the temperature at the boundary for the following cases.

i) Assume linear temperature distribution near the wall.

ii) Assume the temperature distribution at the boundary is represented by a second degree polynomial.