

MATH 497 / 597 – Homework 8

Your work on this assignment must be handed in by Tuesday, 10 December 2002 at 3:15 p.m. GOOD LUCK!

1) At the end of our discussion of the two-dimensional Galerkin method, we created part of a chart in which we organized the relevant information. We completed the chart for the case where $i = 3$. We did not consider the cases where $i = 5$ or $i = 6$. This is your task: complete the chart for these latter two values of i .

2) When we discussed the collocation method, the piecewise cubic basis functions f_j and g_j were of fundamental importance. Derive formulas for $f_j(x)$ and $g_j(x)$.