

AMSC 612 Fall 2008
NUMERICAL METHODS FOR PDE
HOMEWORK # 3 (due Th October 23)

1 (20 pts). Problem 3.4 and 3.8 of Larsson and Thomée.

2 (15 pts). Problem 3.13 of Larsson and Thomée.

3 (30 pts). Problem 4.5 of Larsson and Thomée for $h = 1/10, 1/20, 1/40, 1/80$. Explain how the error at $(0.5, 0.05)$ behaves in terms of h . Use the MATLAB command `diag` to construct the stiffness matrix.

4 (20 pts). Problem 5.12 of Larsson and Thomée.

5 (15 pts). Problem 5.13 of Larsson and Thomée.