

Math 712, **Homework Set 7**, October 26, 2005
Due Friday, November 6

1. Do Problems 4.4.2 and 4.4.3 from the textbook. For Problem 4.4.2, what does the stability analysis procedure say in the case $|a\lambda| = 1$?
2. Do Problem 5.2.3 from the textbook. Produce graphs of the phase velocity error vs. kh for various $|a\lambda|$. How does the numerical dispersion behave with $|a\lambda|$? Also, determine whether the Crank-Nicolson is a dissipative scheme.