Homework Assignment for Week 09

Assigned April 23, 2011.

1. Section 2.6: Problems 4(b), 7(a), 10, 13.

2. Problems 6.50, 6.53(if time permits), 6.56(c), 6.81 from the supplementary hand out. This hand out and the one distributed in class are from the book by Bender and Orszag cited on p151 of the textbook.

3. We showed in class the leading term of the solution of viscous Burgers' equation is given by that of the inviscid Burgers' equation ($\varepsilon = 0$). Find the $O(\varepsilon)$ correction for $t < t_c$. What is the leading term if $t > t_c$?