

HW7

May 20, 2009

1. Exercise 15.2 in the book
2. Show that E schemes:

$$U_j^{n+1} = U_j^n - \frac{k}{h}[F(U_j^n, U_{j+1}^n) - F(U_{j-1}^n, U_j^n)]$$

$\text{sign}(U_{j+1}^n - U_j^n) (F(U_j^n, U_{j+1}^n) - f(u^n)) \leq 0$ for all u^n between U_j^n and U_{j+1}^n are TVD.

3. Start to prepare your final project.