Math 472: Assignment 5 — due Monday, Oct. 31, 2005

1. Do Exercise 4.4 in the textbook.

2. Do parts (b) and (c) of Exercise 5.3 in the textbook.
   Misprint: The formulas for part (a) should read

$$\begin{aligned}
\boldsymbol{y}(t_{n+1}) - \boldsymbol{y}_{n+1} &= -\frac{1}{12}h^3\boldsymbol{y}'''(t_{n+1}) + \mathcal{O}(h^4), \\
\boldsymbol{y}(t_{n+1}) - \boldsymbol{x}_{n+1} &= \frac{5}{12}h^3\boldsymbol{y}'''(t_{n+1}) + \mathcal{O}(h^4).
\end{aligned}$$

3. Do Exercise 5.4 in the textbook.