Problem Set 3, due Tuesday February 17.

Read Haberman Chapter 2.5 and begin Chapter 3.
The following problems are from the text. The first problem is worth 10pts and the others 15pts.

2.5.1b
2.5.1 d
2.5.1 f
2.5.3 b
2.5.6 a
2.5.8 a
2.5.14 (Hint: Let Let $\tilde{u}(x,t)$ be the solution of the backward heat equation for the perturbed initial data $f(x) + \frac{1}{n}\sin\frac{n\pi x}{L}$. Find $w = u - \tilde{u}$.