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## Problem Set 6
Due Friday, February 19 (but you can hand it in after winter break)
**Midterm Exam: Wednesday, February 18. Room 340 West Hall 5:30-8:30**
All material through nondegenerate perturbation theory. A list of equations will be provided.

1. Use perturbation theory to find the approximate eigenvalues (correct to order 0.01) and eigenvectors (correct to order 0.1) for the Hamiltonian $\begin{pmatrix} 2.1 & .1 & -.3 & .2 \\ .1 & 5 & .15 & -.1 \\ -.3 & .15 & 9 & 0 \\ .2 & -.1 & 0 & 11.9 \end{pmatrix}$ and compare your answer with the exact results obtained from a computer solution.

2. Problem 91.

3. Problem 92.

4. Problem 93.