Math 306, Linear Algebra II, Winter 2014  
Homework 13, due Friday 3/7

Read sections:
1. Read chapter 5.4

Do the following problems:
1. 5.2.8, 5.2.20
2. Let $a \in \mathbb{R}$ and $T_a : P_2(\mathbb{R}) \to P_2(\mathbb{R})$ be the linear transformation given by $T(p(x)) = ap'(x) + p(x) + p(0)$. Compute $\{b \in \mathbb{R} \mid T_b \text{ is diagonalizable} \}$
3. 5.4.2, 5.4.4, 5.4.5, 5.4.8.

The grader will carefully consider 5.2.8 and 5.4.5 so you should write these up more carefully.