

**HOMEWORK 11**  
**DUE WEDNESDAY, 16 APRIL 2008**

MATH 215 - LINEAR ALGEBRA - TOM LAGATTA

- Read pages
  - 289-295 (Sections 4.3 and 4.4)
- **Section 4.3:** 25
- **Section 4.4:** 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 15, 24, 25, 27, 37, 41, 42, 43, 44

Hints:

- 8-15: Some eigenvectors are obvious. e.g. On 15, the standard basis vectors  $\vec{e}_1, \vec{e}_2$ , and  $\vec{e}_3$  are all eigenvectors (why can you tell just by looking at the matrix?). The work comes when determining any other eigenvectors.
- 44: Look at the statement of Theorem 4.25.