

AMCS 602 Fall 2017  
Homework Set VI, Due Oct. 30, 2017

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**Reading:** Read the Lecture 24 - 31 of Trefethen and Bau: *Numerical Linear Algebra*, which is published by SIAM. Page numbers below refer to this book. The solutions of the following problems should be carefully written up and handed in.

1. Page 188, Problem 24.1. Do part b), c), d), f), g).
2. Page 189, Problem 24.4, where the spectral abscissa is defined as

$$\alpha(A) = \max_{\lambda \in \Lambda(A)} \{\mathbf{Re}(\lambda)\}.$$

3. Page 194, Problem 25.1.
4. Page 201, Problem 26.3.
5. Page 209, Problem 27.1.
6. Page 210, Problem 27.5.
7. Page 233, Problem 30.6.