## 5. Assignment 5

## Due February, 28

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- (1) Implement QR iteration for a real symmetric tridiagonal matrix. Demonstrate its performance on (at least two) examples. What is the complexity of the algorithm?
- (2) Compute a QR step with the matrix

## $\left(\begin{array}{cc} 2 & \varepsilon \\ \varepsilon & 1 \end{array}\right)$

- (a) without a shift
- (b) with the shift  $\mu = 1$ .

Which approach appears to be better?