1. Problem 5.4 from the text.

2. Problem 5.5 from the text.

3. Problem 5.6 from the text. In part (vi) of this problem, look at use of MATLAB’s \texttt{lu} command both in the form \([L,U]=\texttt{lu}(A)\) as well as \([L,U,P]=\texttt{lu}(A)\).

4. Problem 5.10 from the text. In part (i) of this problem, show “hand calculations” that determine the solution \(y\) in \(Ly = b\) and \(x\) in \(Ux = y\). (You don’t have to show hand calculations that determine \(L\) and \(U\).)

5. Problem 5.13 from the text.

6. Problem 5.14 from the text. Also determine the number of additions (including subtractions), multiplications, and divisions that were used in your calculations.

7. Problem 5.23 from the text.

8. Problem 5.33 from the text.

9. Problem 5.34 from the text.