ELEN 3381   Assignment #8

Due date: Shown on the Blackboard.

Solve the following equations using LU factorization "lu", and Cholesky factorization "chol" using MATLAB. Show your MATLAB code. Submit your code and the result screenshot that shows values x, y, and z. You have already calculated the solution when you solved them with Gaussian Elimination (Assignment #7). Compare the answers from LU factorization and Cholesky factorization with the known answer from Assignment #7.

$$2x + 3y + 5z - 38 = 0$$
$$7x + 11y + 13z - 101 = 0$$
$$17x + 19y + 29z - 235 = 0$$

Please submit:

1. MATLAB code of LU factorization and screenshot.   (3 pts)

2. MATLAB code of Cholesky factorization and screenshot.   (3 pts)

3. Verify answers from 1 and 2 with the known answer from Assignment #7. If they are not the same, explain why it happened.   (4 pts)