Homework 1 due Thursday week 4

Problem 1 (100 points) Write a MATLAB program to solve the differential equation:

\[ af''(t) + bf'(t) + cf(t) = 0 \]

using the Laplace transform. Solve the equation for \( a = 1, b = -8, c = 15 \) and \( f(0) = 13 \) and \( f'(0) = -7 \).

Hints: Use the class notes on the Laplace Transform and the example in Section 3.4 of the function \texttt{quadroots(a,b,c)}. 