Review the relevant material in the text, chapter 8.

Problems Due: Friday, January 19. **Include Matlab code** with submitted work.

1. (20 points, half for the Matlab portion.) Text, problem 8.29. Solve the problem (find $i_L(t)$ by hand calculation). Then, define state variables, determine the required initial conditions, and use Matlab to solve for the inductor voltage, $v_L(t)$, as well as the inductor current. Plot the Matlab results, carefully labeling the curves in the plots (and verify they match your hand-calculation solution).

2. (20 points, half for the Matlab portion) Text, problems 8.33. Solve the problem (find $i_0(t)$) by hand calculation. Then, define state variables, determine the required initial conditions, and use Matlab to solve for the inductor current as well as the inductor voltage, $v_L(t)$, for $t \geq 0$. Plot the Matlab results (and verify they match your hand-calculation solution).