

ECE 301
Fall Semester, 2006
HW Set #6

Due: October 1, 2006
 wlg

Name _____
 Print(last, first)

circle: 2:10 section 3:40 section

Use Engineering Paper. Work only on one side of the paper. Use this sheet as your cover sheet, placed on top of your work and stapled in the top left-hand corner. Number the problems at the top of the page, in the center of the sheet. **Do neat work. Underline your answers. Show how you got your equations. Be sure to show how you got your answers.**

Each problem counts 20 points.

- (1) You are given the circuit of Figure 1.
 (a) Determine $v(0^-)$. Ans 4 V
 (b) Determine $v(t)$, $t \geq 0$. Ans $20 - 16e^{-(t/8)}$ V

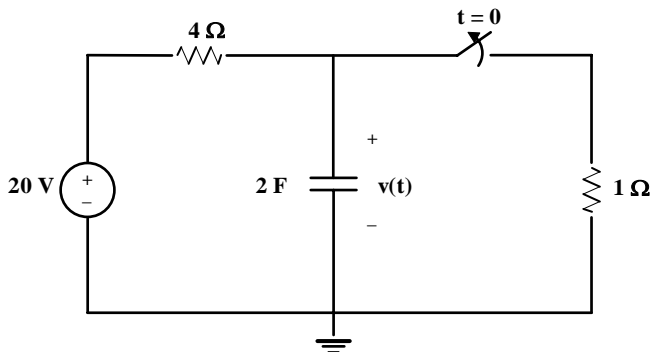


Figure 1: Circuit for problem 1.

- (2) The switch in the circuit of Figure 21 has been open for a very long time. It is closed at $t = 0$.
 (a) Determine $i(0)$. Ans: 5 A
 (b) Determine $i(t) \geq 0$. Ans: $5e^{-0.5t}$ A

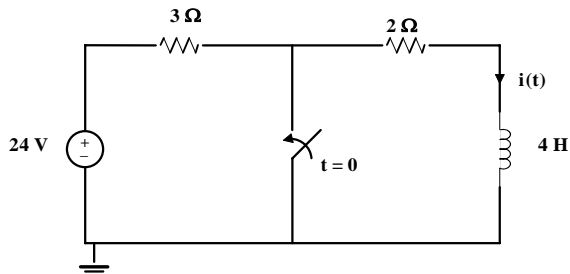


Figure 2: Circuit for problem 2.