EE49, Spring 2019, HW 5 Addendum

Copies of select practice problems and examples from A&S for those who have a different version of the textbook.

Practice Problem 5.9

Determine v_o and i_o in the op amp circuit in Fig. 5.30.

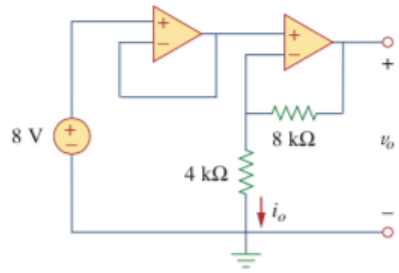


Figure 5.30
For Practice Prob. 5.9.

Answer: 24 V, 2 mA.

Practice Problem 5.10

If $v_1 = 4$ V and $v_2 = 3$ V, find v_o in the op amp circuit of Fig. 5.33.

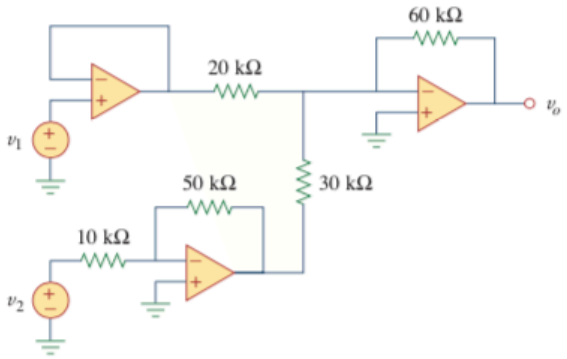


Figure 5.33
For Practice Prob. 5.10.

Answer: 18 V.

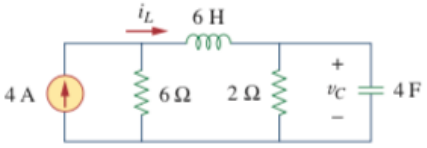
Practice Problem 6.3

The current through a 100-μF capacitor is $i(t) = 50 \sin 120\pi t$ mA. Calculate the voltage across it at $t = 1$ ms and $t = 5$ ms. Take $v(0) = 0$.

Answer: 93.14 mV, 1.736 V.

Practice Problem 6.10

Determine v_C, i_L, and the energy stored in the capacitor and inductor in the circuit of Fig. 6.28 under dc conditions.



Answer: 6 V, 3 A, 72 J, 27 J.