

Boise State University
Electrical and Computer Engineering Department

EE 210: Circuits I
Spring 2017

HW #2
Due Date: January 25 2017

Problem 1

A bar of silicon is 4 cm long with a circular cross section. If the resistance of the bar is 240Ω at room temperature, what is the cross-sectional radius of the bar?

Problem 2

Find i_1 , i_2 , and i_3 in Fig. 1.

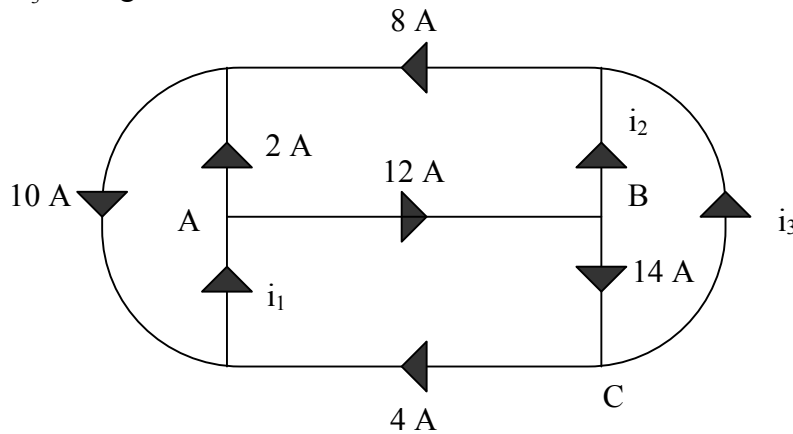


Figure 1

Problem 3

In the circuit of Fig. 2, calculate V_1 and V_2 .

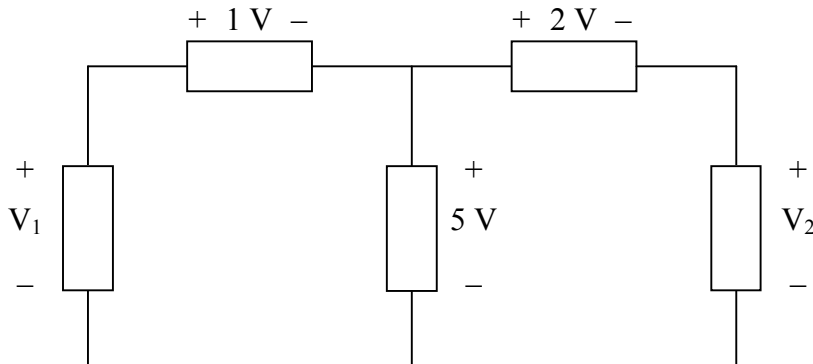


Figure 2

Problem 4

Calculate v and i_x in the circuit of Fig. 3.

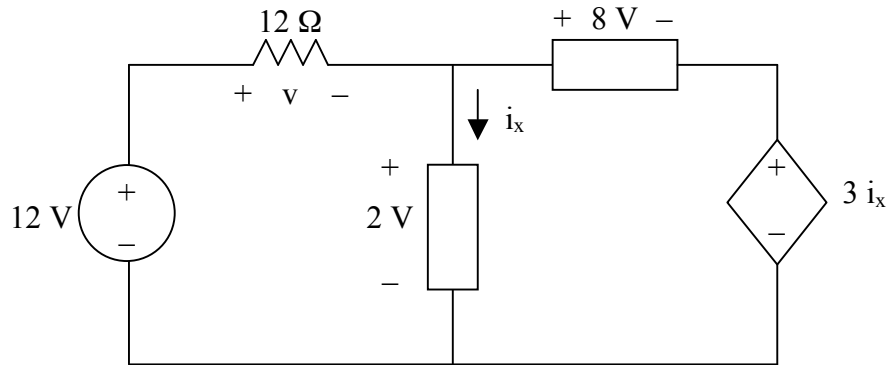


Figure 3

Problem 5

Obtain v_1 through v_3 in the circuit in Fig. 4

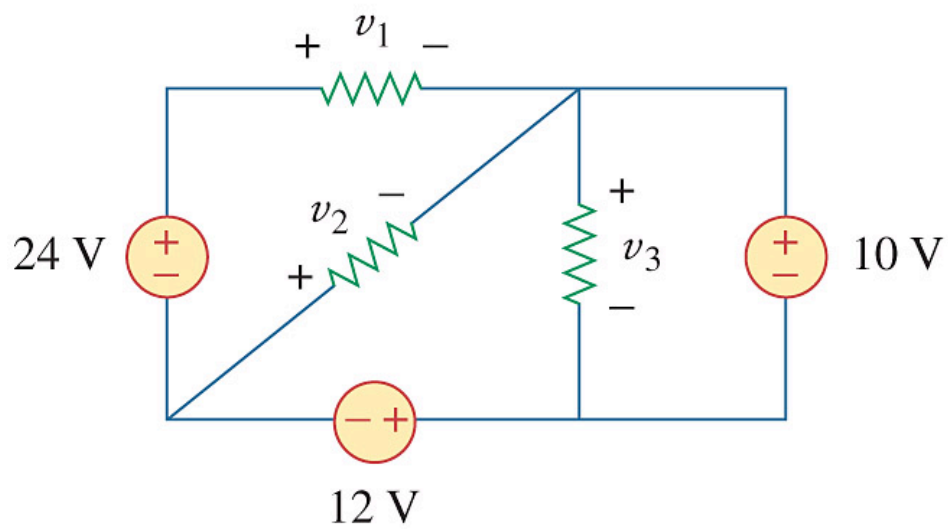


Figure 4

Problem 6

Calculate V_o in the circuit of Fig. 5

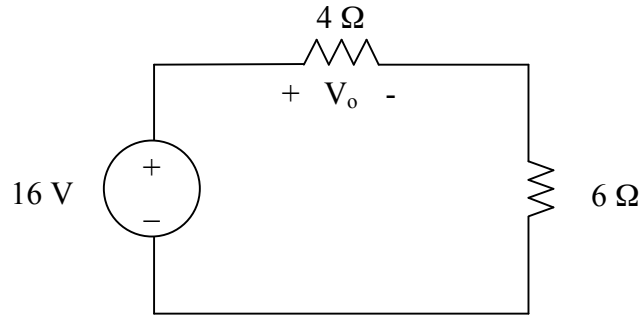


Figure 5

Problem 7

All resistors in Fig. 6 are $1\ \Omega$ each. Find R_{eq} .

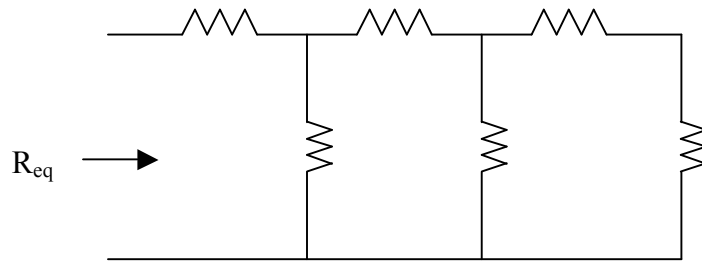


Figure 6

Problem 8.

For the circuit in Fig. 7, determine i_1 to i_5 .

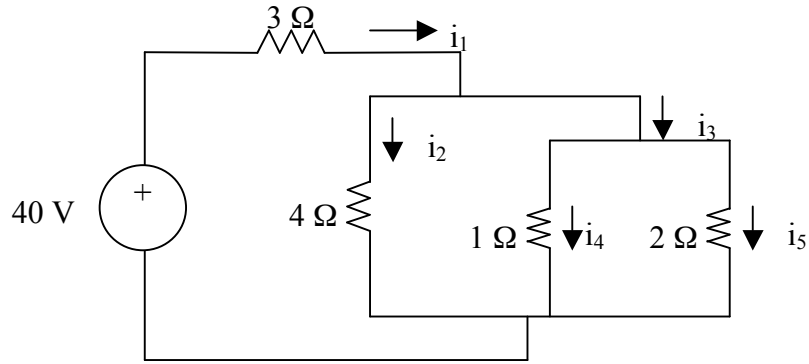


Figure 7

Problem 9.

Obtain v and i in the circuit in Fig. 8.

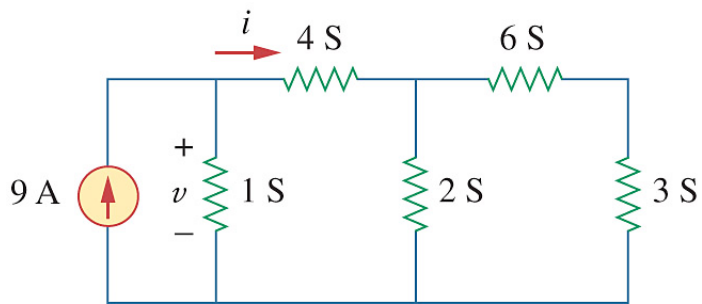


Figure 8

Problem 10.

Find R for the circuit in Fig. 9.

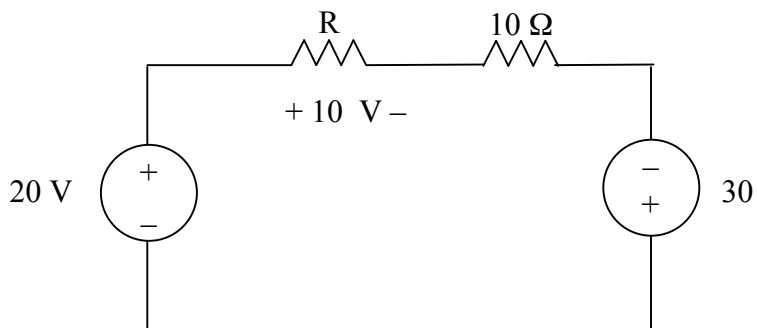


Figure Fig 9