

Problem 1.

Find the hot resistance of a lightbulb rated 80 W, 120 V.

Problem 2.

- (a) Calculate current i in Fig. 2.1 when the switch is in position 1.
 (b) Find the current when the switch is in position 2.

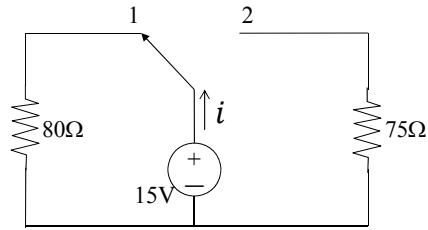


Figure 2.1

Problem 3.

Find i_1 , i_2 , and i_3 in Fig. 2.2

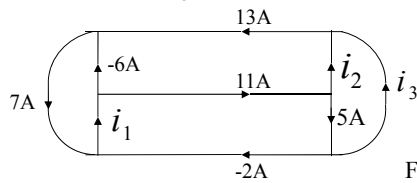


Figure 2.2

Problem 4.

In the circuit in Fig. 2.3, obtain v_1 , v_2 and v_3 .

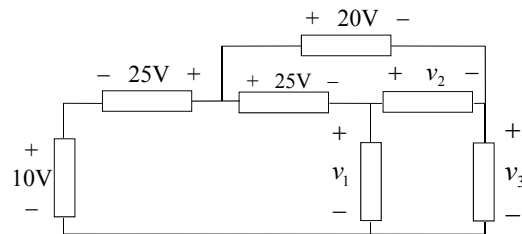
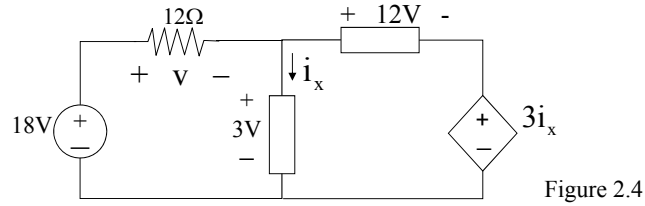


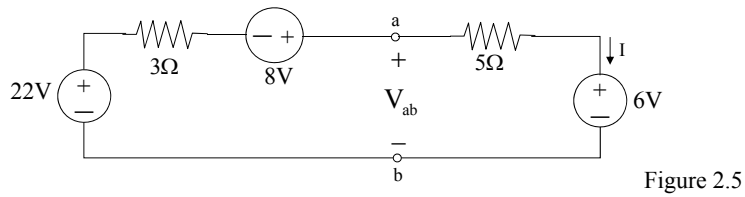
Figure 2.3

Problem 5.

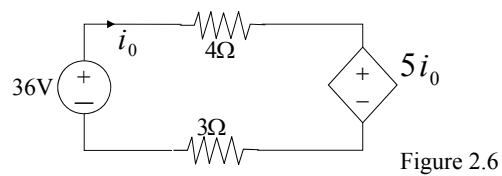
Calculate v and i_x in the circuit of Fig. 2.4

**Problem 6.**

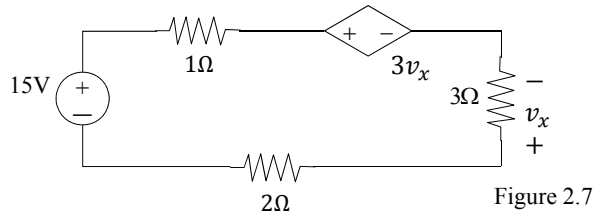
Find I and V_{ab} in the circuit of Fig. 2.5.

**Problem 7.**

Determine i_0 in the circuit of Fig. 2.6.

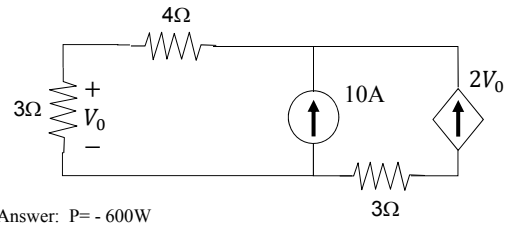
**Problem 8.**

Find v_x in the circuit of Fig. 2.7.



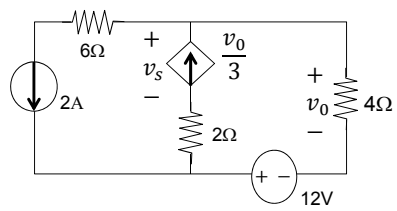
Problem 9.

Find V_0 in the circuit below and the power dissipated by the controlled source.



Answer: $P = -600\text{W}$

Problem 10. Determine v_0 and v_s for the circuit below:



Answer: $v_0 = 24\text{V}; v_s = 28\text{V}$