Preparation for Circuits

Concept Questions: Kirchoff's Laws

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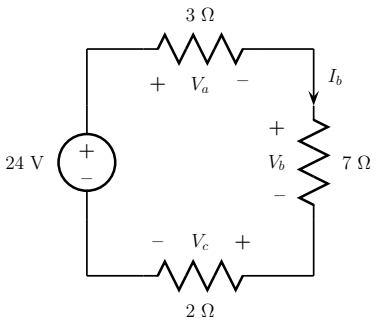
1. What are V_a, V_b, and V_c?

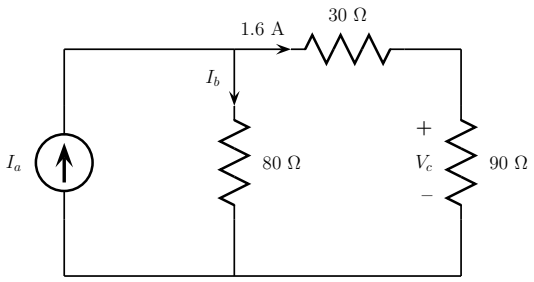


   (A) 6V, 14V, and 4V
   (B) 4V, 6V, and -14V
   (C) 6V, 14V, and -4V
   (D) 4V, 6V, and 14V

2. Find the power delivered by the battery in the previous problem.

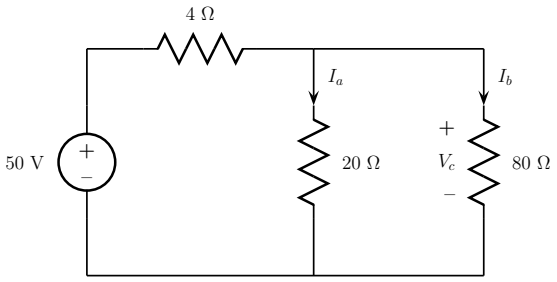
   (A) 12W
   (B) 24W
   (C) 36W
   (D) 48W

3. What are I_a and V_c?



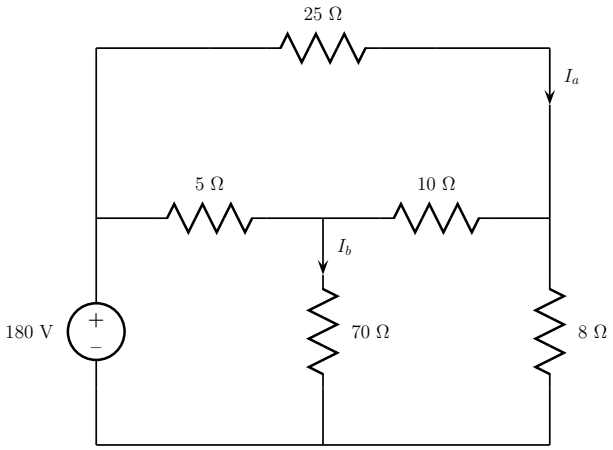
   (A) -4A and 192V
   (B) -2.4A and 192V
   (C) 2.4A and 144V
   (D) 4A and 144V

4. What are I_a and V_c?



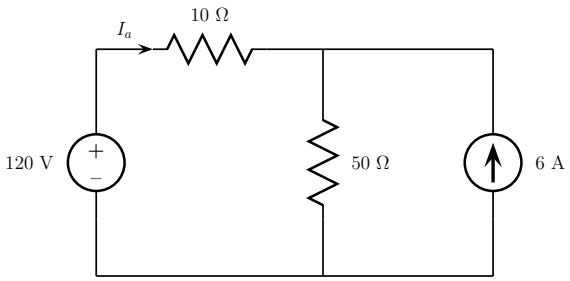
(A) 0.5A and 10V
(B) 2.0A and 10V
(C) 2.0A and 40V
(D) 0.5A and 40V

5. If I_a is 4 amps, what is I_b?



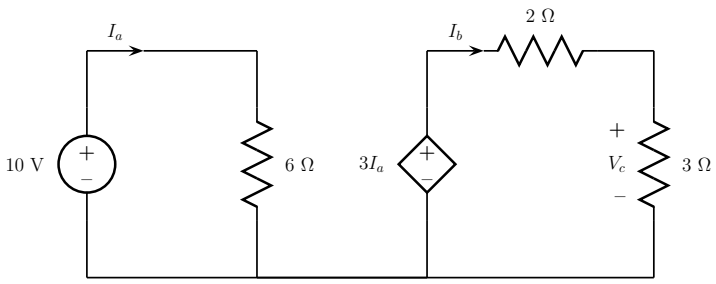
(A) 10A
(B) -6A
(C) 4A
(D) 2A

6. Use Kirchoff's laws and Ohm's law to find I_a:



(A) -6A
(B) -3A
(C) 6A
(D) 3A

7. Use Kirchoff's laws and Ohm's law to find V_c:



(A) -5V

(B) -3V

(C) 5V

(D) 3V