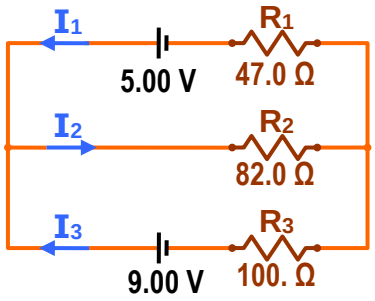
Kirchhoff's Rules

Consider the following circuit:



A. Using Kirchhoff's Rules, write the equation for:
   1) the top loop

   2) the bottom loop

   3) the current

B. Evaluate the following:
   1) I_1
   2) I_2
   3) I_3
   4) V_{R1}
   5) V_{R2}
   6) V_{R3}

SOLUTIONS

A. (1) $-R_1I_1 + 5 - R_2I_2 = 0$ (2) $-R_2I_2 - R_3I_3 + 9 = 0$ (3) $I_1 + I_3 = I_2$

B. (1) 10.3 mA (2) 55.1 mA (3) 44.8 mA (4) 0.483 V (5) 4.52 V (6) 4.48 V

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