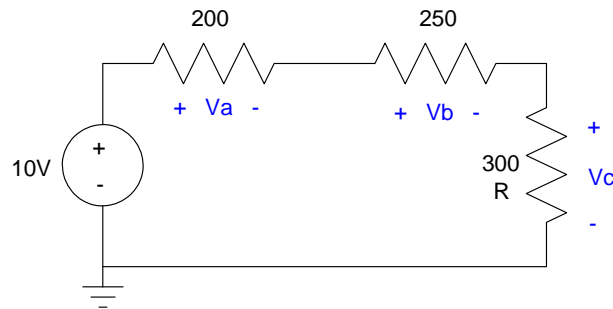


Voltage and Current Division

EE 206 Practice Problems

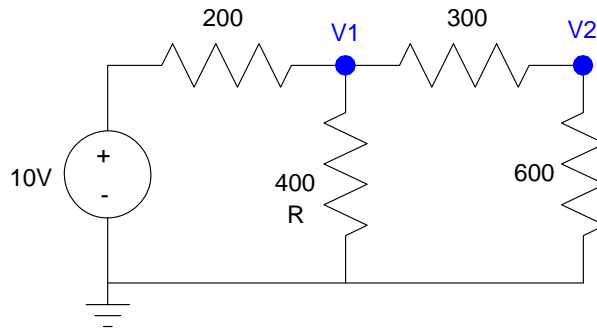
Voltage Division

- 1) Determine the voltages V_a , V_b , and V_c using voltage division
- 2) Suppose $V_c = 6V$. Find R



Problem 1 & 2

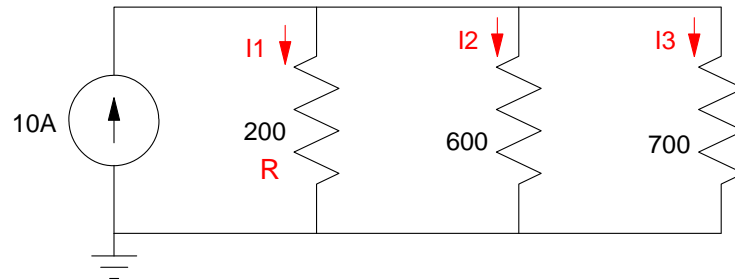
- 3) Determine the voltages V_1 and V_2 using voltage division and simplifying the circuit by adding resistors in series and parallel
- 4) Suppose $V_1 = 7.00V$. Find R .
- 5) Suppose $V_1 = 2.00V$. Find R .



Problem 3 & 4

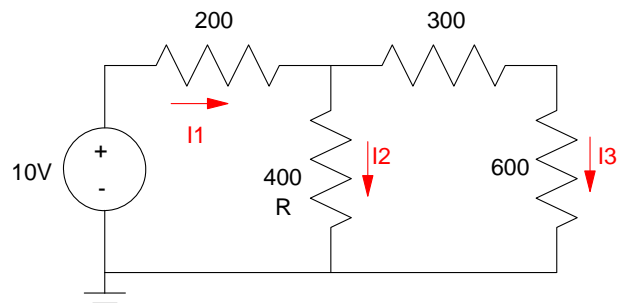
Current Division

- 6) Find the currents I_1 , I_2 , and I_3
- 7) Suppose $I_1 = 6\text{A}$. Determine R
- 8) Suppose $I_3 = 1\text{A}$. Determine R



Problem 6-8

- 9) Determine the currents I_1 , I_2 , and I_3



Problem 9

Solutions

Problem 1)

- $V_a = 2.667V$
- $V_b = 3.333V$
- $V_c = 4.000V$

2) $R = 675 \text{ Ohms}$

Problem 3)

- $V_1 = 5.806V$
- $V_2 = 3.871V$

4) $R = 969.231 \text{ Ohms}$

5) $R = 52.941 \text{ Ohms}$

Problem 6)

- $I_1 = 6.176A$
- $I_2 = 2.059A$
- $I_3 = 1.765A$

7) $R = 215.385$

8) $R = 2907.692$

Problem 9)

- $I_1 = 20.97mA$
- $I_2 = 14.52mA$
- $I_3 = 6.54mA$