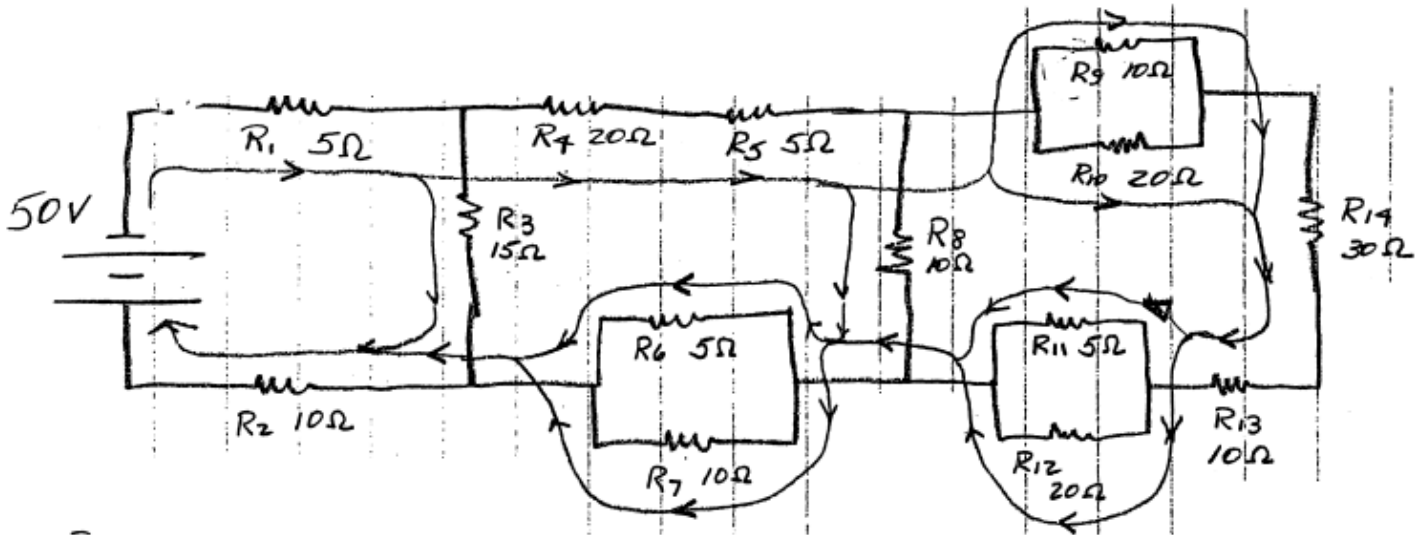




Basic Electricity – Unit 6: Other Basic Circuit Fundamentals

Homework 2

Instructions: Solve the following circuit.

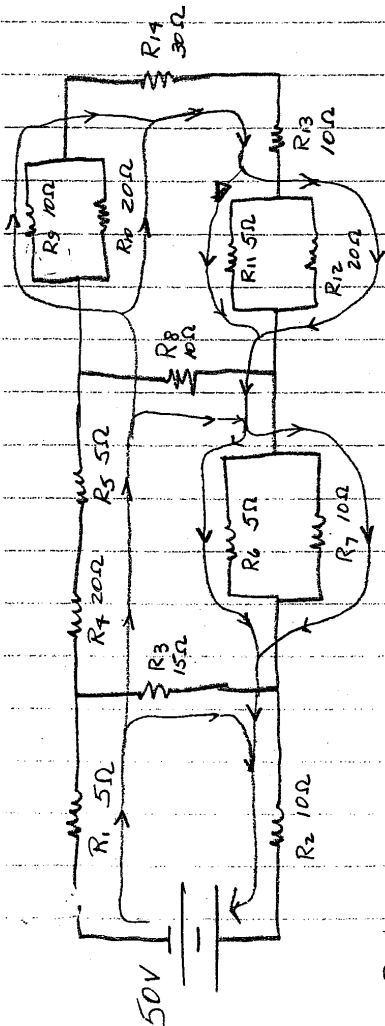




Basic Electricity - Unit 6: Other Basic Circuit Fundamentals

Homework 2

Solution:



$$R_T = 25.64670446 \Omega$$

$$I_T = 1.949568221 \text{ A}$$

$$VR_1 = 9.747841105 \text{ V}$$

$$VR_2 = 19.49568221 \text{ V}$$

$$VR_3 = 20.75647668 \text{ V}$$

$$IR_3 = 1.383765112 \text{ A}$$

$$IR_4 = .565803108 \text{ A}$$

$$IR_5 = .565803108 \text{ A}$$

$$VR_4 = 11.31606217 \text{ V}$$

$$VR_5 = 2.829015544 \text{ V}$$

$$VR_6 = 1.886010362 \text{ V}$$

$$VR_7 = 1.886010362 \text{ V}$$

$$IR_6 = .377202072 \text{ A}$$

$$IR_7 = .188601036 \text{ A}$$

$$VR_8 = 4.7253886 \text{ V}$$

$$IR_8 = .47253886 \text{ A}$$

$$IR_{13} = .093264248 \text{ A}$$

$$IR_{14} = .093264248 \text{ A}$$

$$VR_{13} = .932642487 \text{ V}$$

$$VR_{11} = .373056995 \text{ V}$$

$$VR_{12} = .373056995 \text{ V}$$

$$IR_{11} = .074611399 \text{ A}$$

$$IR_{12} = .074611399 \text{ A}$$

$$VR_9 = .621761653 \text{ V}$$

$$VR_{10} = .621761653 \text{ V}$$

$$IR_9 = .062176165 \text{ A}$$

$$IR_{10} = .062176165 \text{ A}$$

$$VR_1 + VR_2 + VR_4 + VR_5 + VR_7 + VR_{13} + VR_{14} + VR_{12} + VR_9$$

$$= 49.99999999 \text{ V}$$

$$IR_{14} + IR_8 + IR_3$$

$$= 1.94956822 \text{ A}$$



Basic Electricity – Unit 6: Other Basic Circuit Fundamentals

Homework 2

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