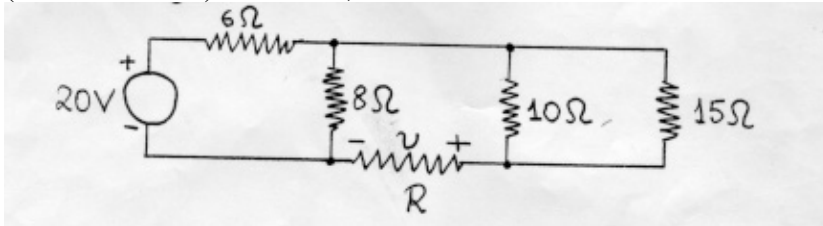


**EECS 42, Spring, 1995
Midterm #1
Professor Paul Hagouel**

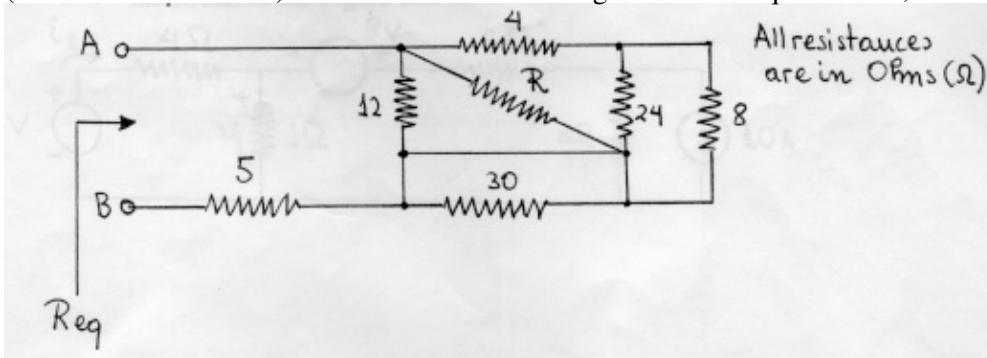
Problem #1

(Resistor circuits): If $v = 2\text{ V}$, find the resistance R of the circuit in the Figure below.



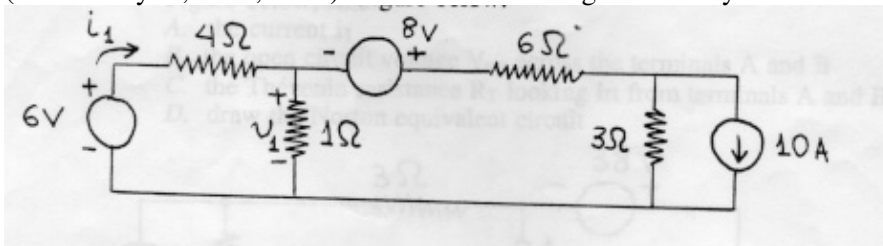
Problem #2

(Resistor combinations): If for the circuit in the Figure below $R_{eq} = 9\text{ Ohms}$, find the resistance R .



Problem #3

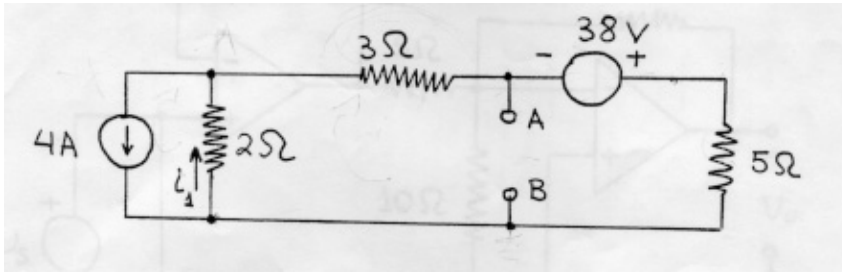
(Mesh analysis, KCL, KVL): Find i_1 and v_1 using mesh analysis for the circuit in the Figure below.



Problem #4

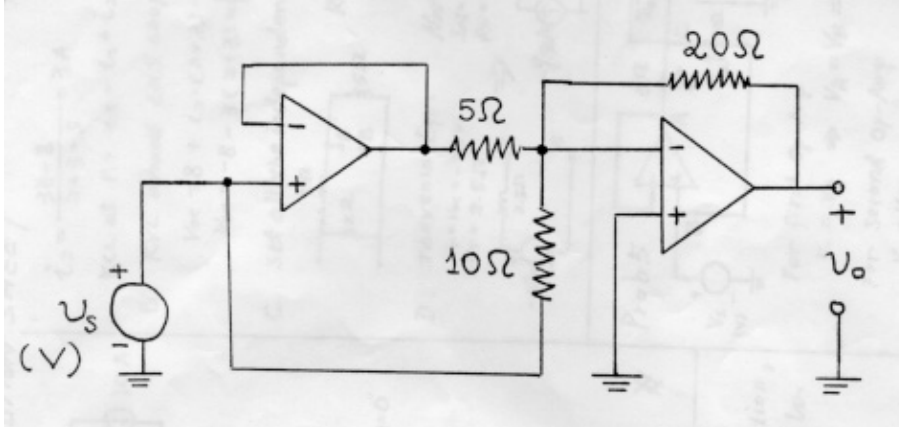
(Thevenin and Norton equivalent circuits): For the circuit in the Figure below, find:

- A. the current i_1
- B. the open circuit voltage V_{0c} across the terminals A and B
- C. the Thevenin resistance R_t looking in from terminals A and B
- D. draw the Norton equivalent circuit



Problem #5

(Operational Amplifiers): Determine V_0 for the circuit below when all operational amplifiers are ideal.



Solutions!

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