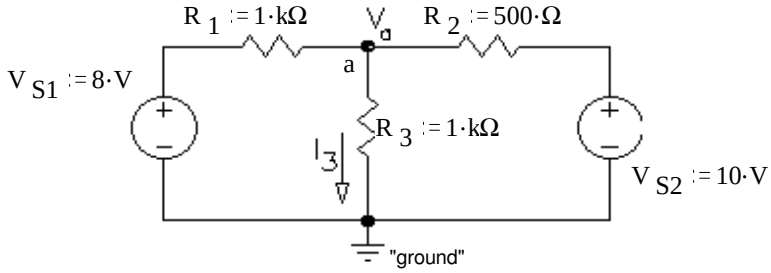
Name_____ 2210 / 00 **Homework DC4** Due: Tue, 9/3/24 a

Superposition

1. Use superposition to find I_3. Circle your intermediate solutions on your paper. Your intermediate solutions show how much of I_3 is due to V_{S1}, and how much is due to V_{S2}.

The "node" at the black dot is node "a".
V_a is a node voltage, referenced to ground. $V_a = V_{R3}$



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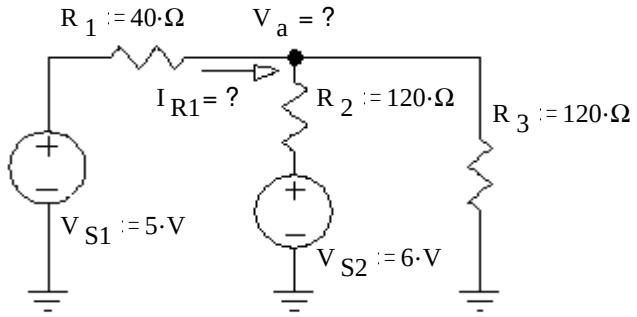
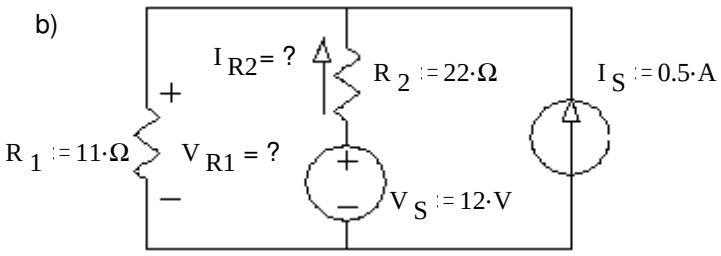
2. Use superposition to solve following problems:
   Each problem asks for both a current and a voltage.
   Clearly indicate your intermediate answers,
   the grader will look for those.

a)

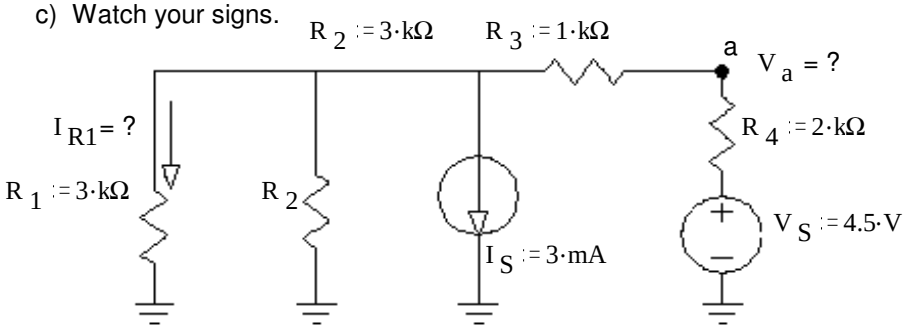


These are ground symbols. They are all connected together, although that connection is not explicitly shown.

b)



c) Watch your signs.



Answers 1. $2\cdot mA + 5\cdot mA = 7\cdot mA$

2. a) $4.2\cdot V$, $20\cdot mA$ b) $7.67\cdot V$, $197\cdot mA$ c) $0.5\cdot V$, $-0.5\cdot mA$