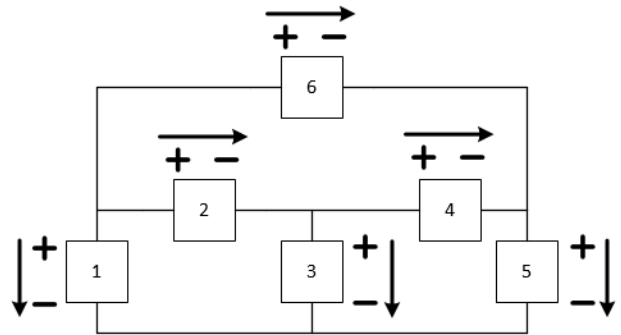


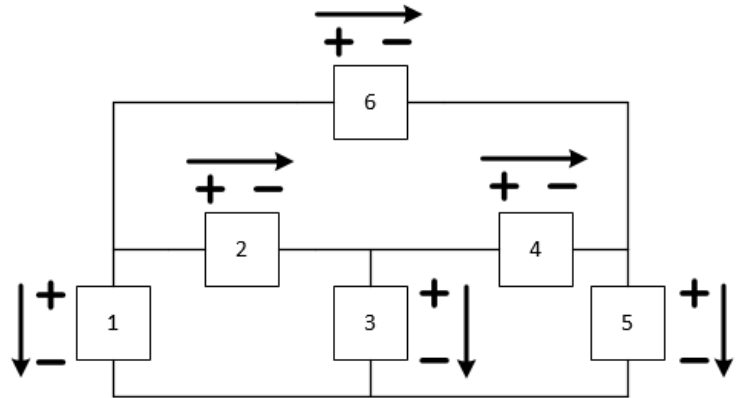
4. If $V_1 = 0.7 V$, $V_4 = 0.3 V$, $V_5 = 0.4 V$ in the circuit below, what is V_2 ?

- a. $1.4 V$
- b. $0.8 V$
- c. $0.6 V$
- d. $0 V$
- e. $-0.6 V$



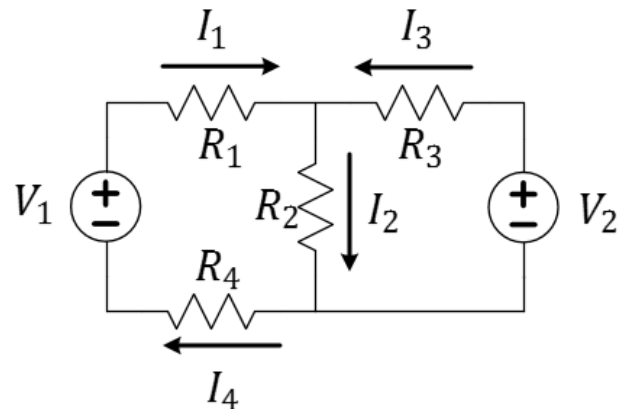
5. If $I_1 = -10 mA$ (yes, I_1 is negative), $I_3 = 6 mA$, $I_6 = 8 mA$ in the circuit below, what is I_4 ?

- a. $-0 mA$
- b. $-4 mA$
- c. $-6 mA$
- d. $-10 mA$
- e. $-20 mA$



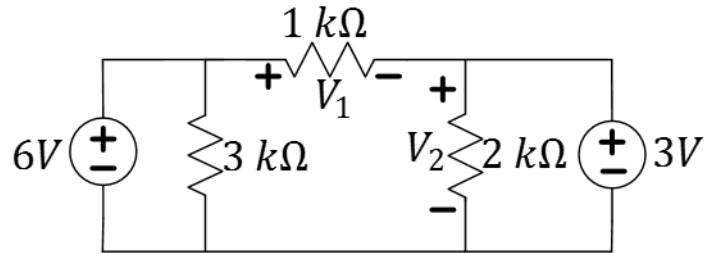
6. Which of the following KCL and KVL equations is **incorrect** for this circuit?

- a. $I_1 = I_4$
- b. $I_2 = I_3 + I_4$
- c. $I_2 R_2 + I_3 R_3 - V_2 = 0$
- d. $I_1 R_1 + I_2 R_2 + I_4 R_4 = V_1$
- e. $V_1 - I_1 R_1 - I_3 R_3 - V_2 - I_4 R_4 = 0$



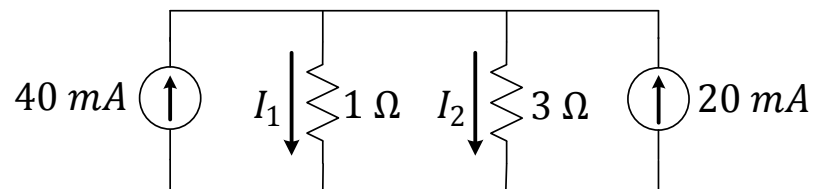
10. What are the voltages V_1 and V_2 in the circuit below?

- a. $V_1 = 2\text{ V}$ and $V_2 = 4\text{ V}$
- b. $V_1 = 3\text{ V}$ and $V_2 = 3\text{ V}$
- c. $V_1 = 4\text{ V}$ and $V_2 = 2\text{ V}$
- d. $V_1 = 6\text{ V}$ and $V_2 = 6\text{ V}$
- e. Not enough info to tell



11. What are the values of the currents I_1 and I_2 in the circuit below?

- a. $I_1 = 30\text{ mA}$ and $I_2 = 10\text{ mA}$
- b. $I_1 = 10\text{ mA}$ and $I_2 = 30\text{ mA}$
- c. $I_1 = 45\text{ mA}$ and $I_2 = 15\text{ mA}$
- d. $I_1 = 15\text{ mA}$ and $I_2 = 45\text{ mA}$
- e. $I_1 = 15\text{ mA}$ and $I_2 = 5\text{ mA}$



12. What is the value of resistance R needed to make $V_o = 4\text{ V}$?

- a. $1\text{ k}\Omega$
- b. $1.2\text{ k}\Omega$
- c. $1.5\text{ k}\Omega$
- d. $2\text{ k}\Omega$
- e. $3\text{ k}\Omega$

