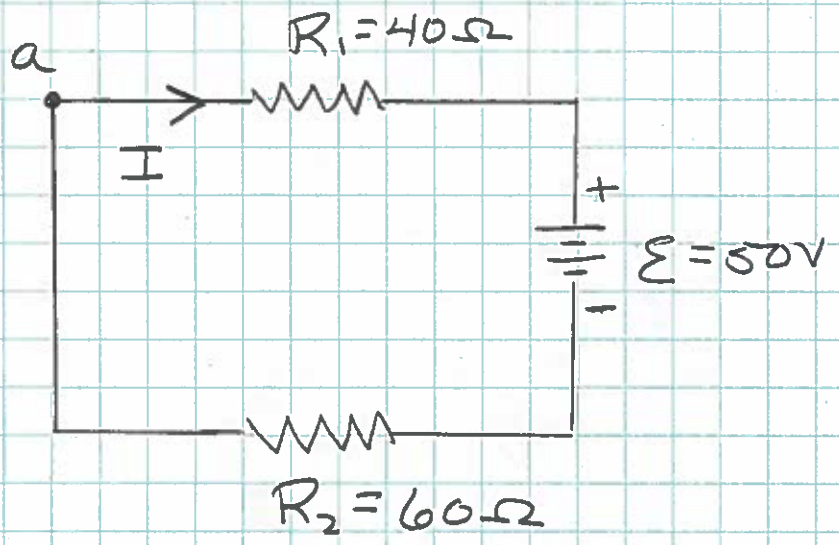

assume I as shown.

loop ↻ from a:

$$-IR_1 - \mathcal{E} - IR_2 = 0$$

So: $$I = \frac{-\mathcal{E}}{R_1 + R_2} = \underline{-0.5A}$$

Negative ⇒ <u>CCW</u>

Potential across each resistor:

$$\Delta V_1 = IR_1 = \underline{20V}$$

$$\Delta V_2 = IR_2 = \underline{30V}$$