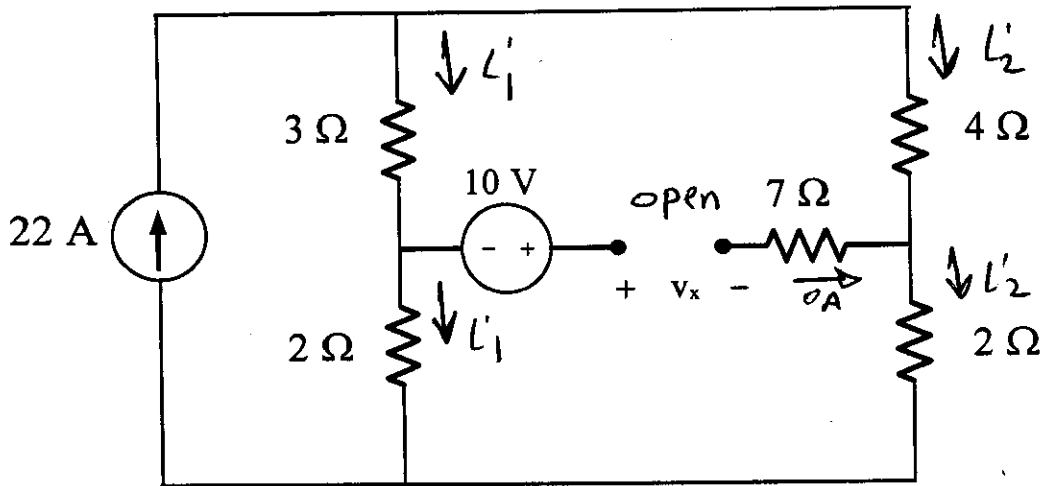


Ser	ID	Name	KEY
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For the circuit shown above, Find the voltage v_x ?

current division rule (CDR) $\Rightarrow I'_1 = \frac{(4+2)}{(3+2)+(4+2)} 22$

$$I'_1 = \frac{6}{11} 22 = 12 \text{ A}$$

$$I'_2 = 22 - I'_1 = 10 \text{ A} \quad \underline{\text{OR}} \quad \text{CDR} \Rightarrow \frac{5}{11} 22 = 10 \text{ A}$$

KVL $-10 + v_x + 0(7) + 2I'_2 - 2I'_1 = 0$
 $\Rightarrow v_x = 14 \text{ V}$

OR

upper loop \Rightarrow KVL :

$$-10 + v_x + 0(7) - 4I'_2 + 3I'_1 = 0$$

$$\Rightarrow v_x = 14 \text{ V}$$