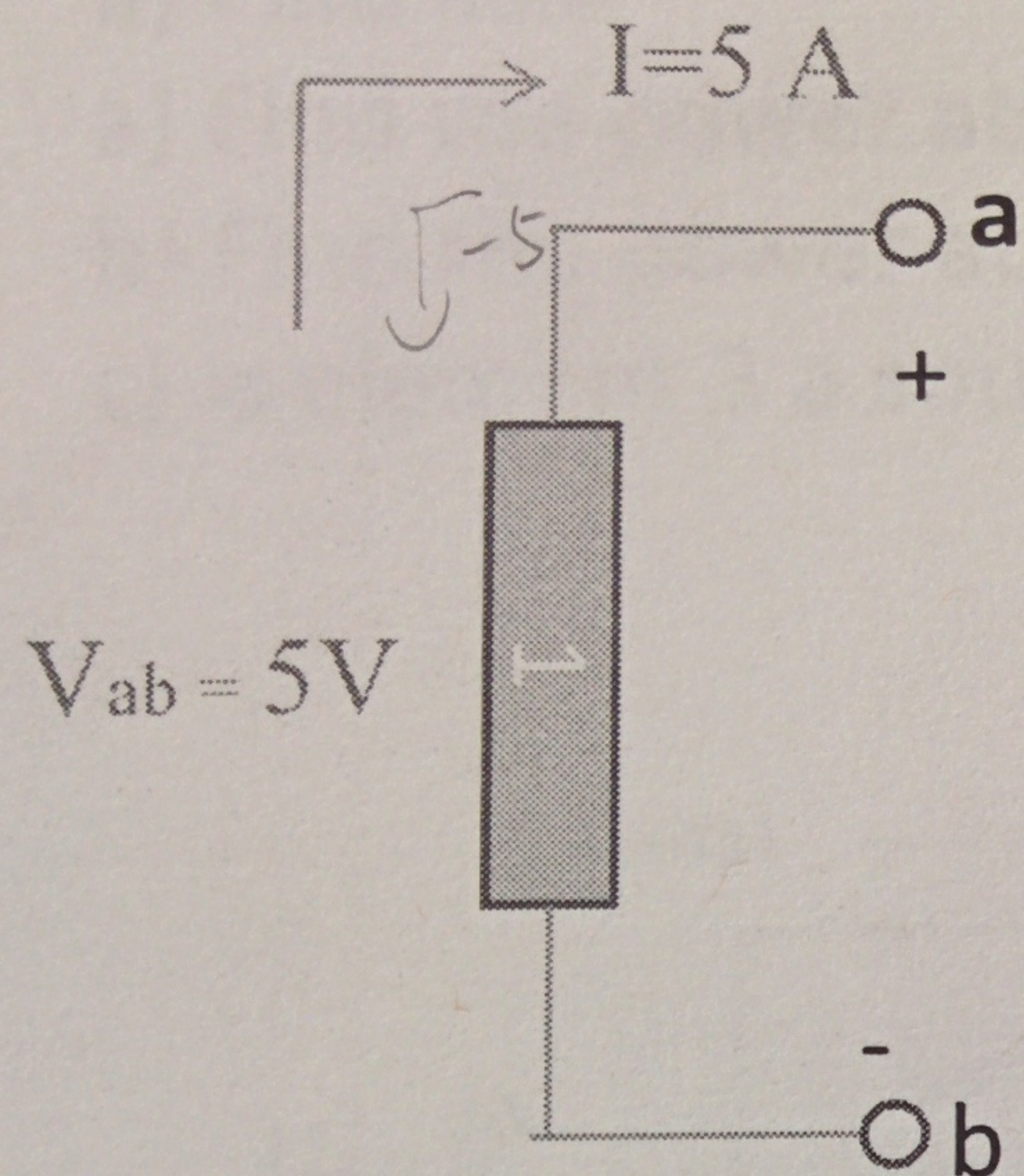


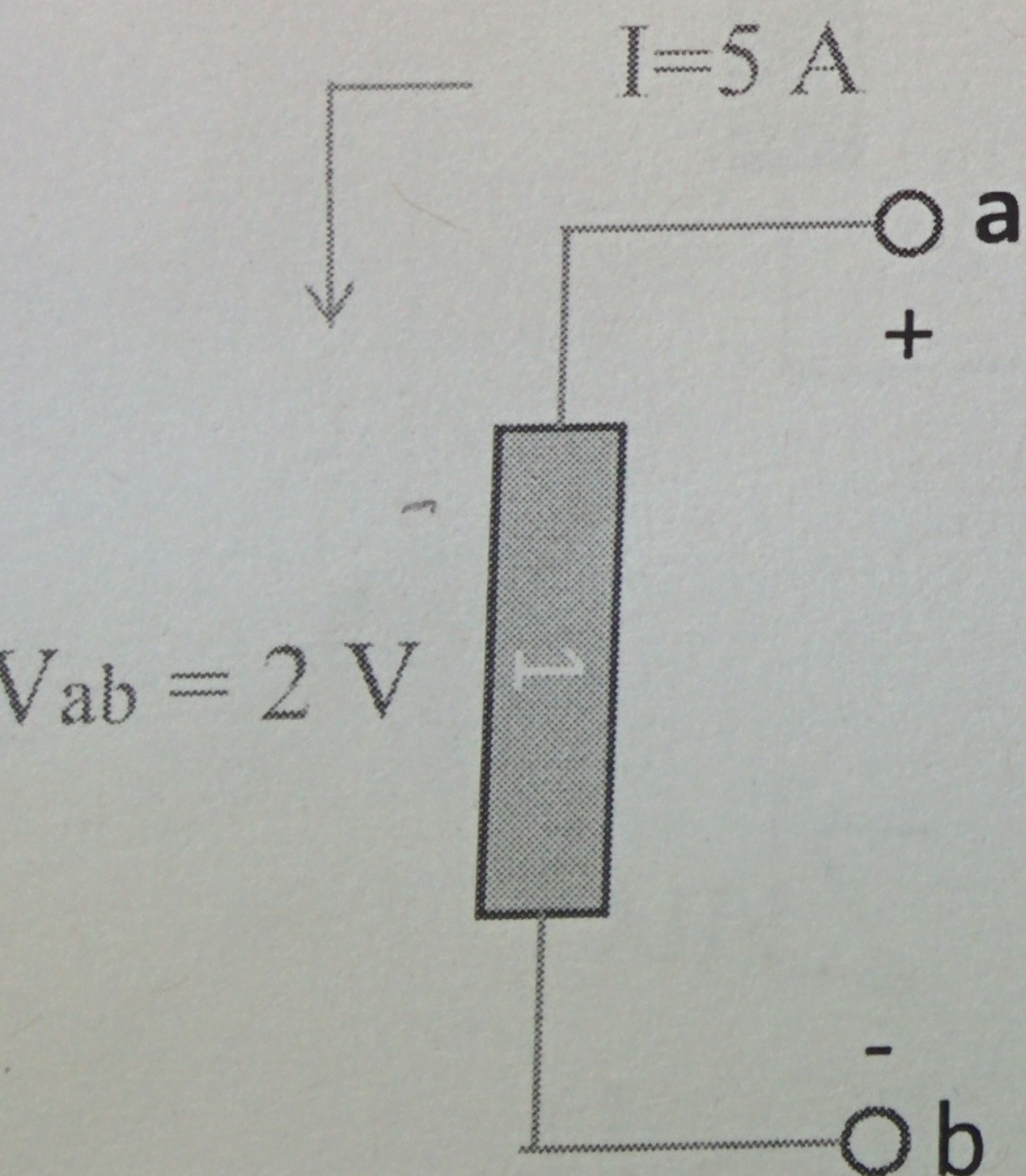
Problem 1: Find the power absorbed or supplied by the element.



$$\begin{aligned} P &= V_{ab} \cdot I_{ab} \\ &= 5\text{V} \cdot -5\text{A} \\ &= -25\text{W} \end{aligned}$$

Power is **supplied**. It is a "**Source**".

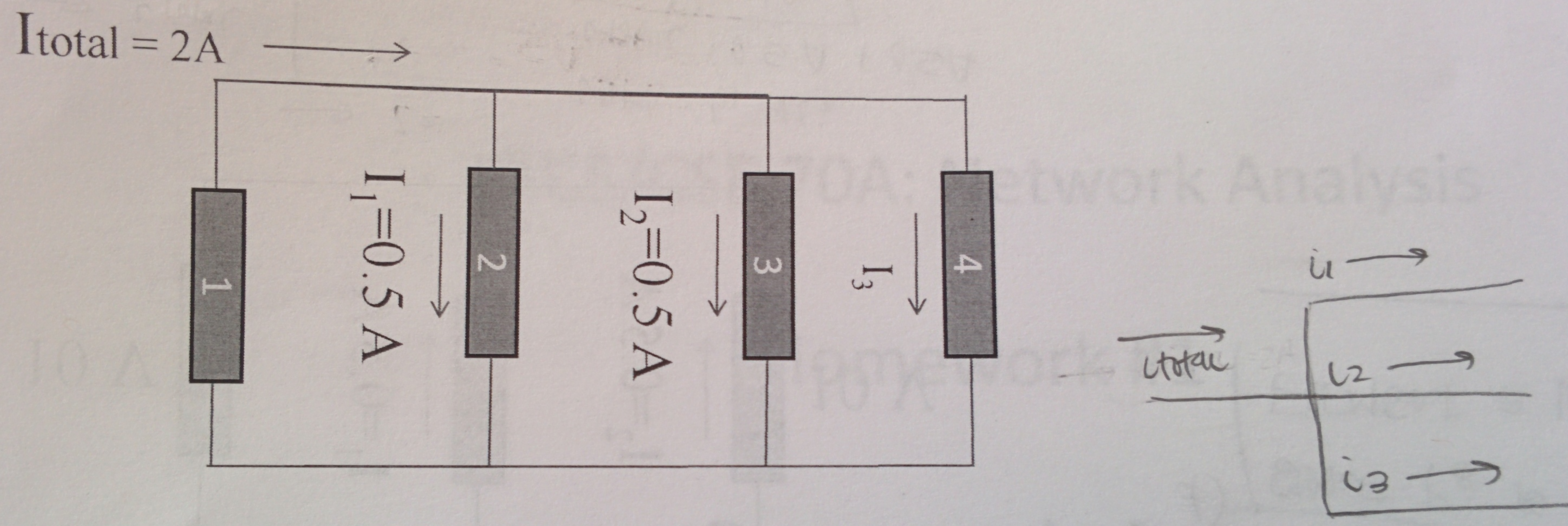
Problem 2: Find the power absorbed or supplied by the element.



$$\begin{aligned} P &= V_{ab} \cdot I_{ab} \\ &= 2 \cdot 5 \\ &= 10\text{W} \end{aligned}$$

Power is **absorbed**. It is a "**sink**".

Problem 3: Find the current I_3 flowing through element 4.



$$I_{total} = I_1 + I_2 + I_3$$

$$2A = 0.5A + 0.5A + I_3$$

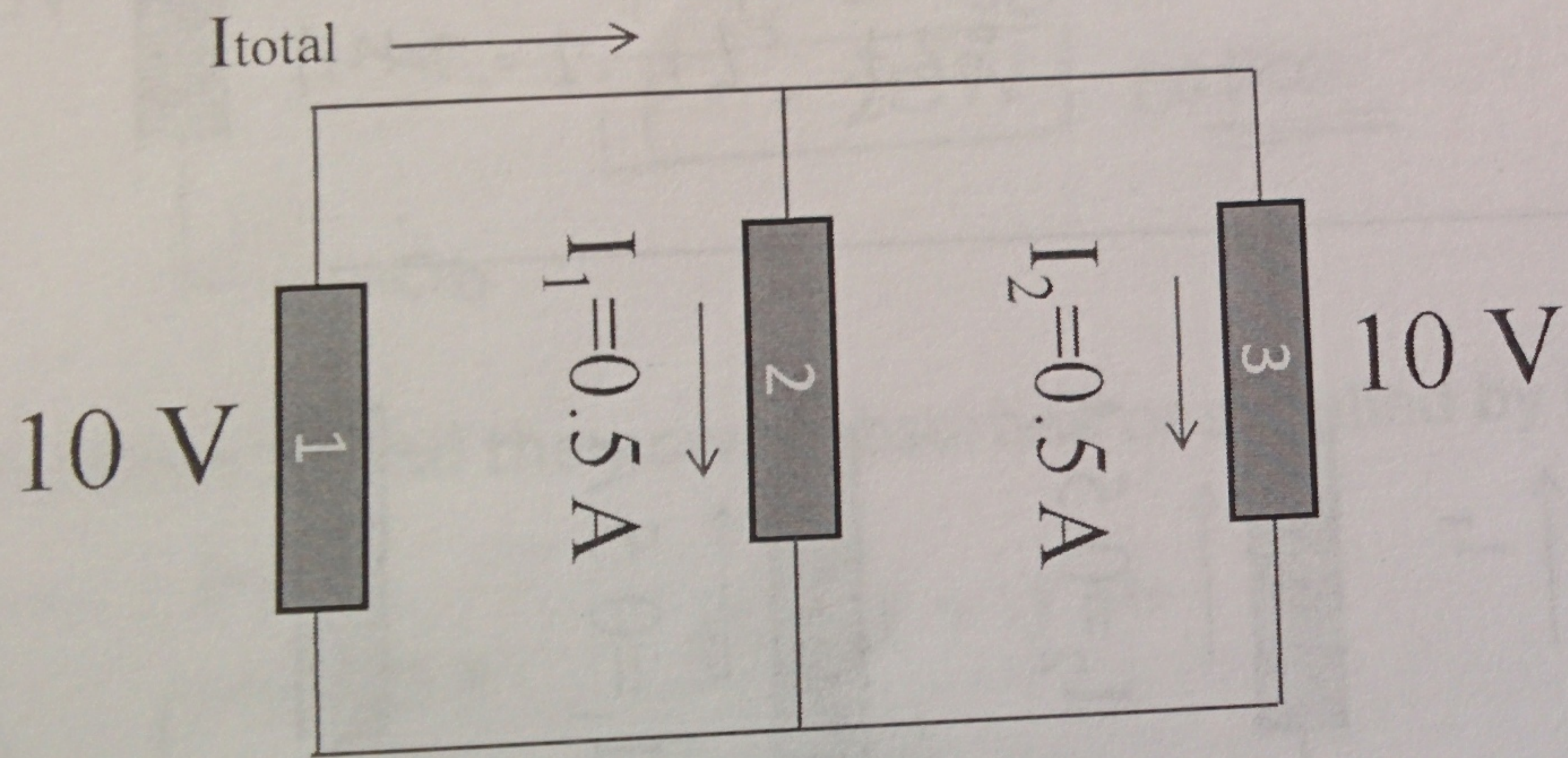
$$2A = 1A + I_3$$

$$I_3 = 1A$$

CURRENT THROUGH ELEMENT #4 IS 1 ANPS
FLOWING IN THE DIRECTION OF ARROW

Problem 4:

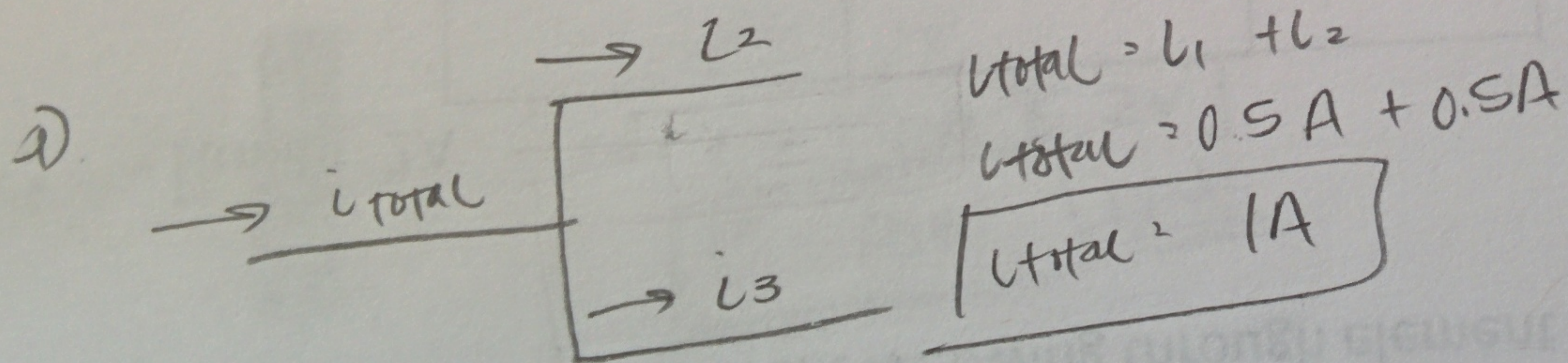
- a) Find I_{total}
- b) Find the power absorbed or supplied by element 1
- c) Find the power absorbed or supplied by element 3
- d) Is element 3 a source or a sink?



c) $P_3 = I_2 \times V_3$
 $P_3 = 2 \times V_3$
 $P_3 = [0.5A][10V]$

$P_3 = 5W$

d) SINCE P_3 IS POSITIVE,
 ELEMENT 3 IS A SINK



b) $P_1 = I_1 \times V_1$
 $P_1 = I_{total} \times V_1$
 $I_{total} = 1A$
 $P_1 = [1A][10V]$
 $P_1 = 10W$