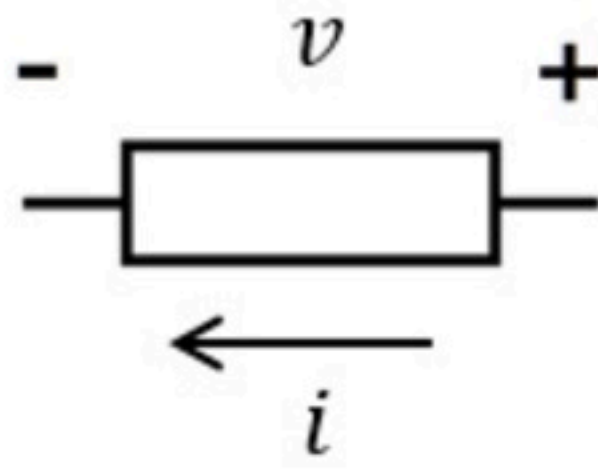


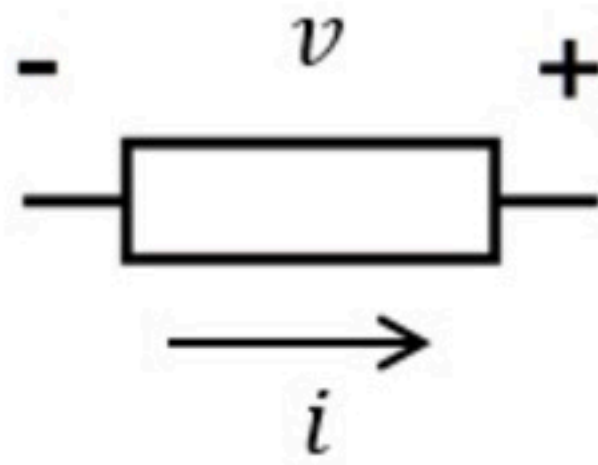
Basic Concepts 011

Problem has been graded.

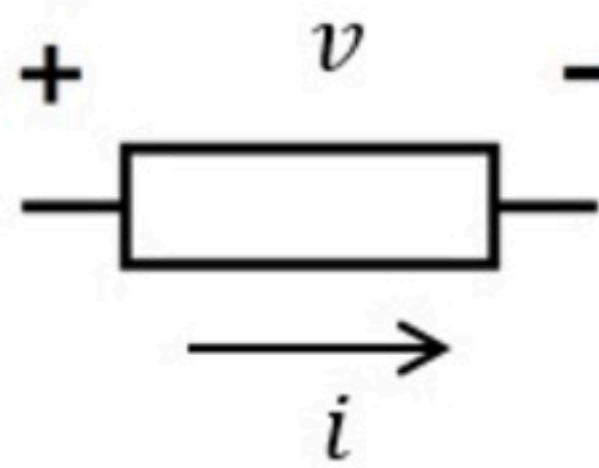
Find the power P_1 supplied by this element:



Find the power P_2 supplied by this element:



Find the power P_3 received by this element:



Given Variables:

v : -5 V

i : 4 A

Calculate the following:

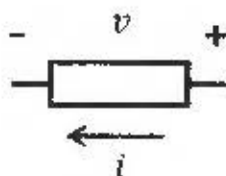
P_1 (W) :

P_2 (W) :

P_3 (W) :

Hint: Convert first to passive sign convention

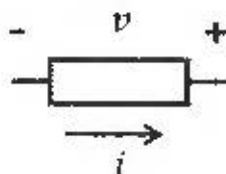
- (a) Find the power P_1 supplied by this element:



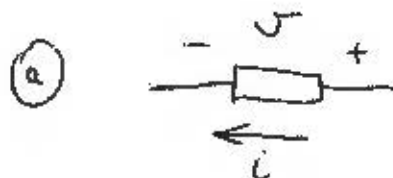
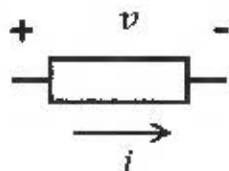
$$v = -2 \text{ V}$$

$$i = 3 \text{ A}$$

- (b) Find the power P_2 supplied by this element:



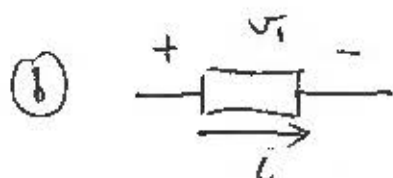
- (c) Find the power P_3 received by this element:



PASSIVE SIGN CONVENTION

$$P = v \cdot i = -6 \rightarrow \text{RECEIVED}$$

$$P_1 = 6 \text{ W SUPPLIED}$$

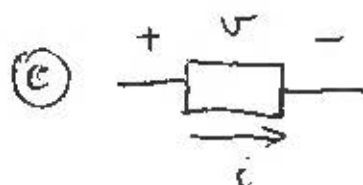


SWITCH TO PASSIVE SIGN CONVENTION

$$v_1 = -v = 2 \text{ V}$$

$$P = v_1 \cdot i = 6 \rightarrow \text{RECEIVED}$$

$$P_2 = -6 \text{ W SUPPLIED}$$



PASSIVE SIGN CONVENTION

$$P = v \cdot i = -6 \rightarrow \text{RECEIVED}$$

$$P_3 = -6 \text{ W RECEIVED}$$