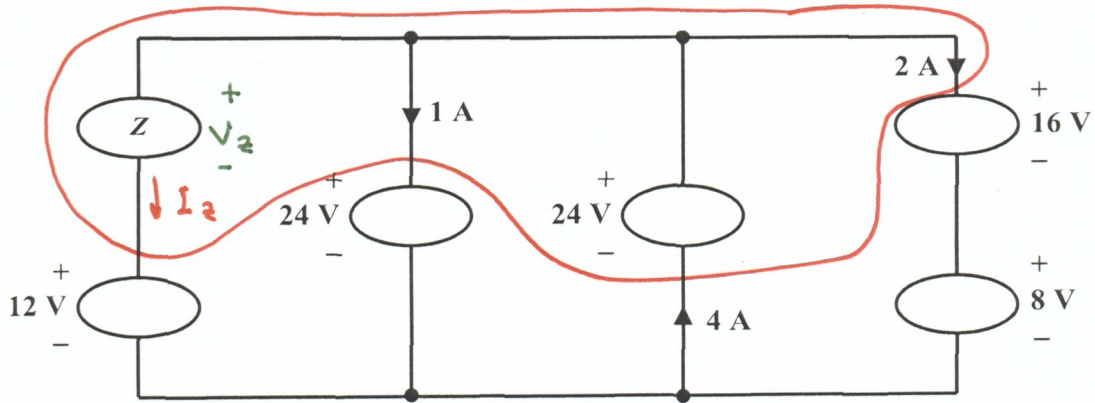


EE 2240  
Problem #01

Does component  $Z$  deliver power or absorb power? How much?



$$\text{KCL: } I_2 + 1\text{A} - 4\text{A} + 2\text{A} = 0 \\ \Rightarrow I_2 = 1\text{A}$$

$$\text{KVL: } V_2 = 24\text{V} - 12\text{V} = 12\text{V}$$

$V_2$  and  $I_2$  satisfy the Passive Sign Convention. Therefore, component  $Z$

$$\text{absorbs } V_2 \cdot I_2 = (12\text{V})(1\text{A}) = 12\text{W}$$