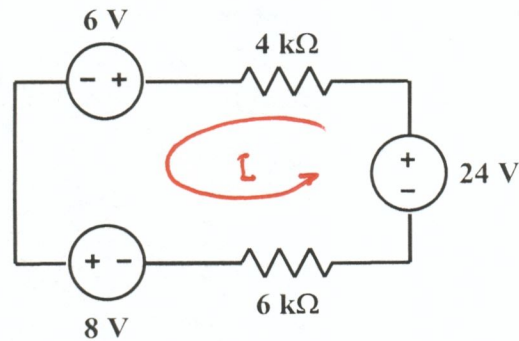


EE 2240  
Problem #05

Determine the amount of power absorbed by the 4-k $\Omega$  resistor.



Assume  $I$  flows counterclockwise as shown.  
Then, from KVL:

$$(4\text{k}\Omega)I + 6\text{V} + 8\text{V} + (6\text{k}\Omega)I - 24\text{V} = 0$$

$$\Rightarrow 10000 I = 10\text{V}$$

$$\therefore I = 1\text{mA}$$

$$P_{4\text{k}\Omega} = I^2 (4\text{k}\Omega) = (1\text{mA})^2 (4\text{k}\Omega) = 4\text{mW}$$