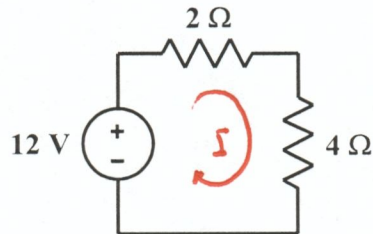


EE 2240
Problem #07

Given the circuit shown below:



a. How much power does the source supply?

Assume I flows clockwise as shown. Then

$$(2\Omega)I + (4\Omega)I = 12V$$

$$\Rightarrow 6I = 12 \quad \text{or} \quad I = 2A$$

The 12V source supplies $(12V) \cdot I = (12V)(2A) = 24W$

b. How much power is absorbed by the 4Ω resistor?

The 4Ω resistor absorbs $(4\Omega)I^2 = (4\Omega)(2A)^2 = 16W$