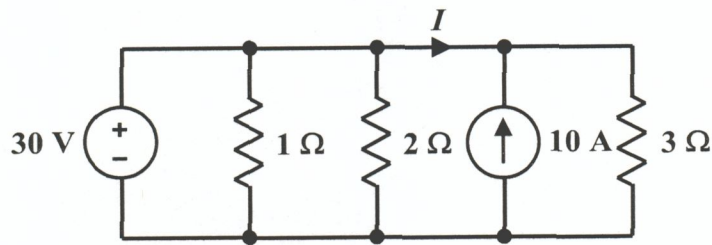


EE 2240
Problem #04



- a. Determine the power absorbed by the 1 Ω resistor.

$$P = \frac{(30V)^2}{1\Omega} = 900W$$

- b. Determine the value of I .

$$I = \frac{30V}{3\Omega} - 10A = 0A$$

- c. Determine the power absorbed by the 3 Ω resistor.

$$P = \frac{(30V)^2}{3\Omega} = 300W$$

$$\text{or } P = (10A)^2 (3\Omega) = 300W$$

- d. How much power is delivered by the 30 V independent voltage source?

$$P = \frac{(30V)^2}{1\Omega} + \frac{(30V)^2}{2\Omega} = 1350W$$

- e. How much power is delivered by the 10 A independent current source?

$$P = (30V)(10A) = 300W$$