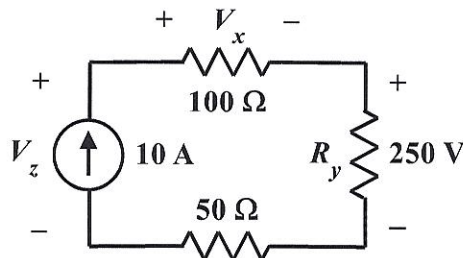


EE/EET 2240
Homework Problem 005

For the circuit shown below:



- a. Determine the value of V_x .

$$V_x = (100\Omega)(10A) = 1000V$$

- b. Determine the value of R_y .

$$R_y = \frac{250V}{10A} = 25\Omega$$

- c. Determine the value of V_z .

$$V_z = (100\Omega + R_y + 50\Omega)(10A) = 1750V$$

- d. How much power does R_y absorb?

$$P_y = (250V)(10A) = 2500W$$

- e. How much power does the independent current source deliver?

$$P_t = V_z(10A) = (1750V)(10A) = 17,500W$$

$$\text{or } 17.5kW$$