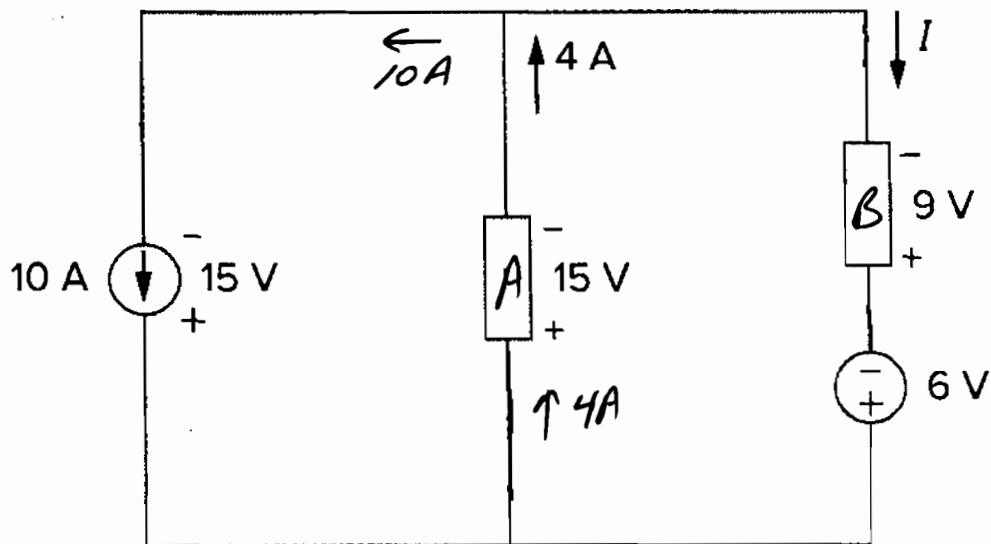


1.19 Find I and the power absorbed by each element in the network.



By conservation of charge (and hence conservation of current)

current(s) in = current(s) out

$$4A = 10A + I$$

$$\hookrightarrow \underline{\underline{I = -6A}}$$

$$P_{15V \text{ source}} = -(15)(10) = \underline{\underline{-150W}}$$

$$P_A = 15(4) = \underline{\underline{60W}}$$

$$P_B = -(9)I = -9(-6) = \underline{\underline{54W}}$$

$$P_{6V \text{ source}} = -(6)I = -6(-6) = \underline{\underline{36W}}$$

$$\text{Check } \Sigma p = 0 = -150 + 60 + 54 + 36 = 0 \therefore$$