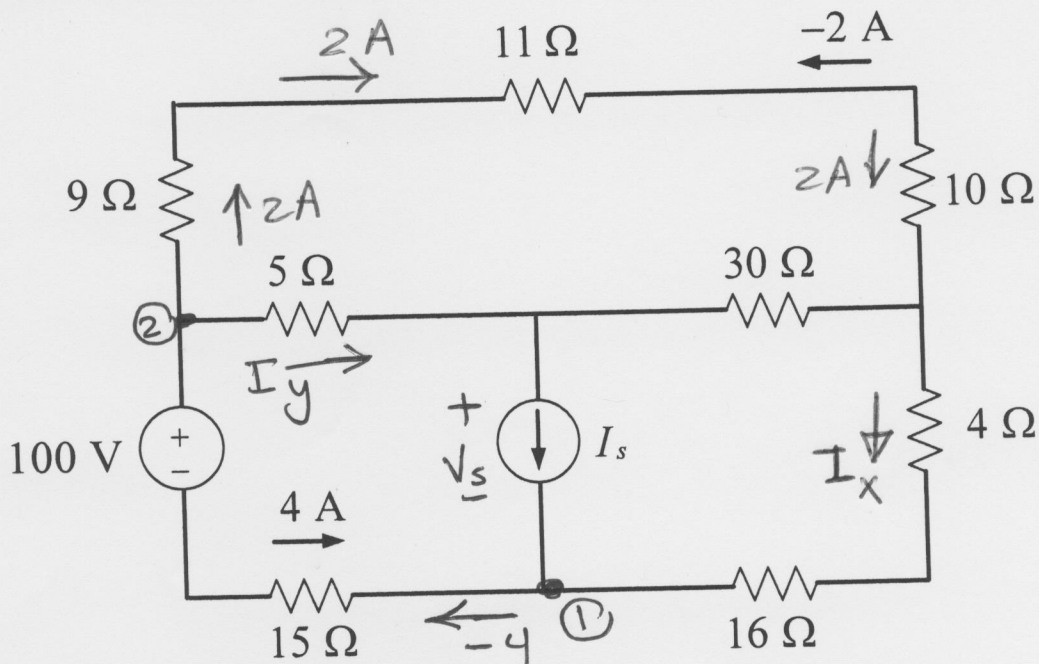


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For the circuit shown above, find the power delivered by the independent current source ?

KVL on outer loop $-100 + 9(2) + 11(2) + 10(2) = 0$
 $+4I_x + 16I_x + 15(-4) = 0$
 $\Rightarrow I_x = 5 \text{ A}$

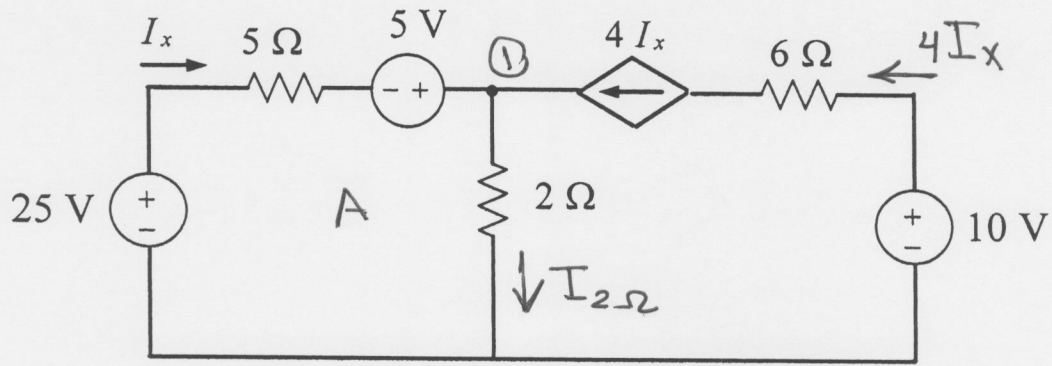
KCL at 1 $\Rightarrow I_s + I_x + 4 = 0 \Rightarrow I_s = -9 \text{ A}$

KCL at 2 $\Rightarrow 2 + I_y + 4 = 0 \Rightarrow I_y = -6 \text{ A}$

KVL $\Rightarrow -100 + 5I_y + V_s - 4(15) = 0$
 $\Rightarrow V_s = 190 \text{ V}$

$P_{I_s}^{\text{absorb}} = V_s I_s = (190)(-9) = -1710 \text{ W}$
 $\Rightarrow P_{I_s}^{\text{deliver}} = 1710 \text{ W}$

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For the circuit shown above, find the power delivered by the 10 V independent voltage source ?

KCL at ① $I_x + 4I_x - 2I_{2\Omega} = 0 \Rightarrow I_{2\Omega} = 5I_x$

KVL on A $-25 + 5I_x - 5 + 2(5I_x) = 0$
 $\Rightarrow I_x = 2A$

absorb
 $P_{10V} = -10(4I_x) = -10(4)(2) = -80W$

$\Rightarrow P_{10V}^{\text{deliver}} = 80W$