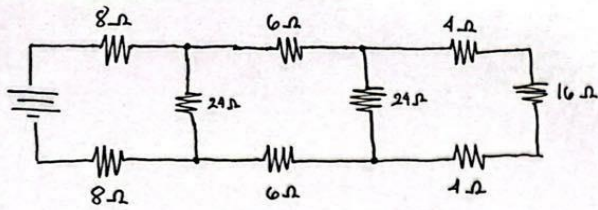


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$$I_T = I_1 + I_2 + I_3$$

$$I_T = 4 + 2 + 2$$

$$I_T = 8 \text{ Amperes}$$

L1

$$224 - 8I_T - 24I_1 - 8I_T = 0$$

$$224 - 16I_T - 24I_1 = 0$$

$$28 - 2I_T - 3I_1 = 0$$

L2

$$24I_1 - 6I_1 - 24I_2 - 6I_1 = 0$$

$$12I_1 - 24I_2 = 0$$

$$12I_1 = 24I_2$$

$$I_1 = 2I_2$$

L3

$$24I_2 - 4I_2 - 16I_3 - 4I_2 = 0$$

$$16I_2 - 16I_3 = 0$$

$$16I_2 = 16I_3$$

$$I_2 = I_3$$

$$28 - 2(I_1 + I_2 + I_3) - 3I_1 = 0$$

$$28 - 2I_1 - 2I_2 - 2I_3 - 3I_1 = 0$$

$$28 - 5I_1 - 2I_2 - 2I_3 = 0$$

$$28 - 5(2I_2) - 2I_2 - 2I_3 = 0$$

$$28 - 5(2I_3) - 2I_2 - 2I_3 = 0$$

$$28 - 10I_3 - 2I_2 - 2I_3 = 0$$

$$28 - 12I_3 = 0$$

$$12I_3 = 28$$

$$I_3 = 2A$$

$$I_1 = 2(2)$$

$$I_1 = 4A$$

$$I_2 = 2A$$

$$P = I^2 R$$

$$P = (2A)^2 16\Omega$$

$$= 64W$$

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