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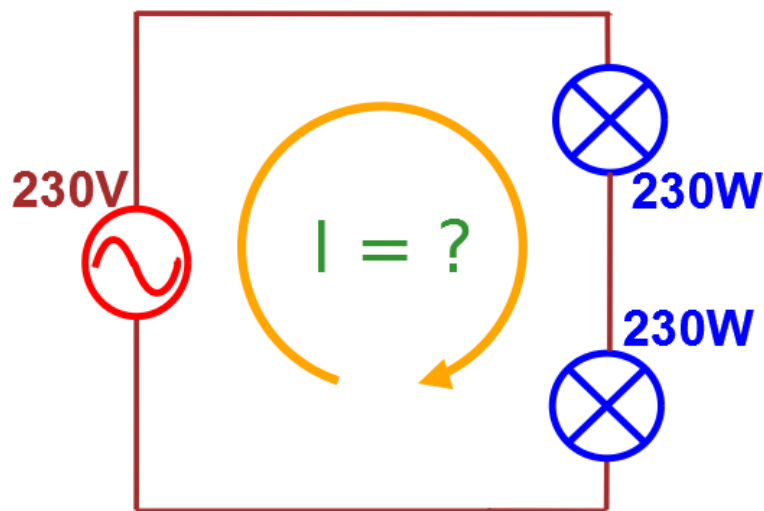
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## Electrical Problem – 51

### Instructions:

1. Do not discuss with any one while solving the problems
2. Do not use internet while solving the problems
3. Do not use books while solving the problems
4. Do not try to copy from others
5. Do the problems in an easy way.



$$\begin{aligned} R_1 &= R_2 = V^2/P \\ R &= 230^2/230 \\ R &= 230\Omega \\ I &= 230/460 \\ I &= 0.5A \end{aligned}$$



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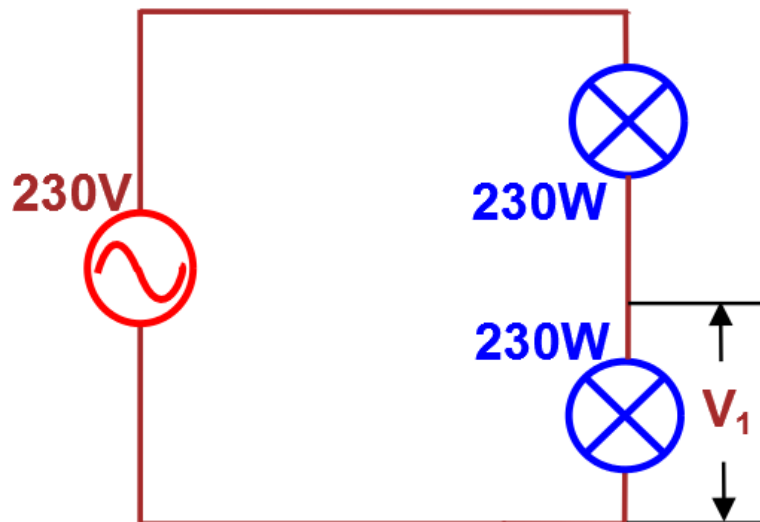
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## Electrical Problem – 52

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$$\begin{aligned} I &= 0.5A \\ V &= IR \\ V &= 0.5 \times 230 \\ V &= 115V \end{aligned}$$



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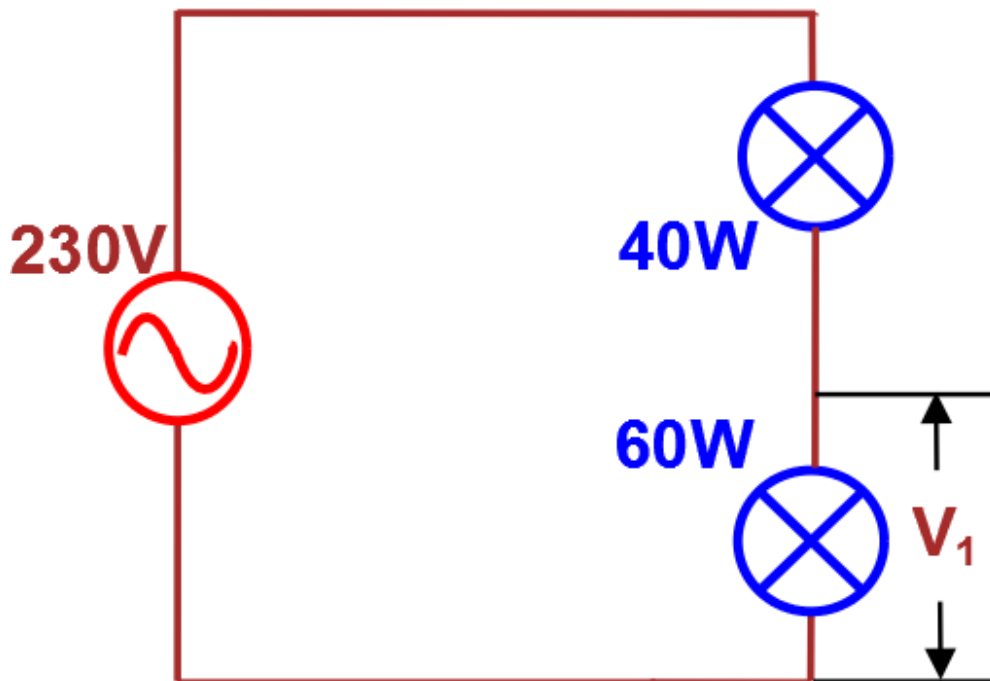
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## Electrical Problem – 53

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$$R = V^2/P$$

$$R_1 = 230^2/60 = 1322.5\Omega$$

$$R_2 = 881.7\Omega$$


$$I = 230/2204.2 = 0.104A$$

$$V = I \cdot R = 0.104 \cdot 881.7 = 91.69V$$



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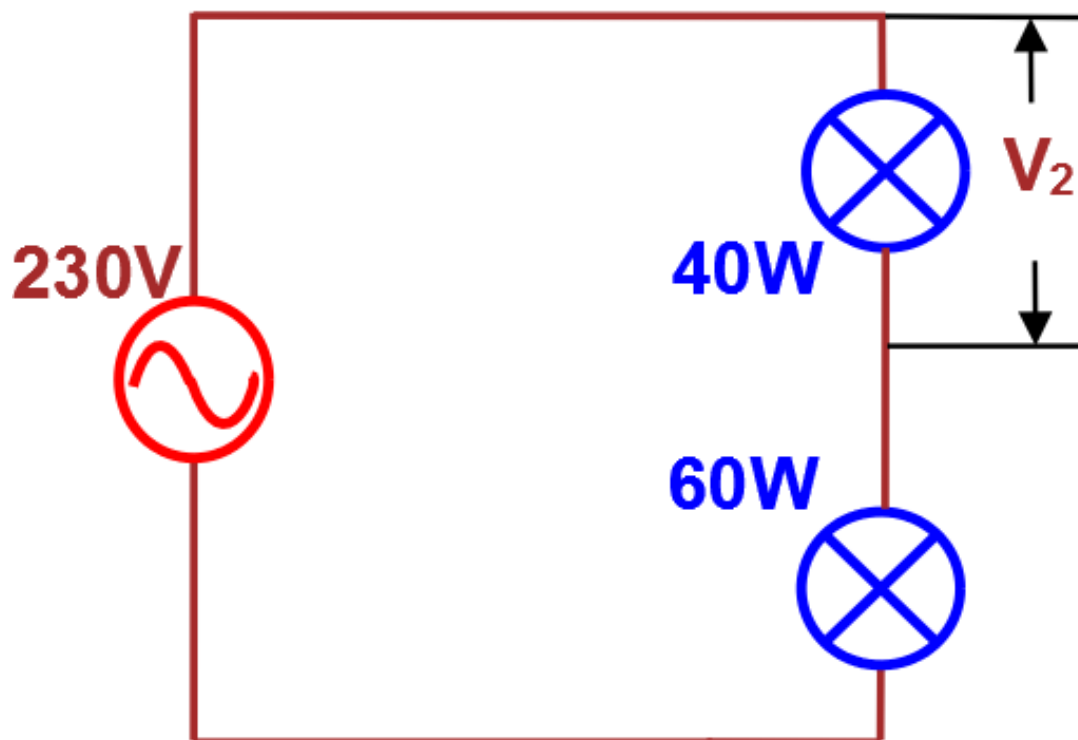
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## Electrical Problem – 54

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$$\begin{aligned}R_1 &= 230 \times 230 / 40 = 1322.5 \\R_2 &= 230 \times 230 / 60 = 881.67 \\I &= 230 / 2204.2 = 0.104A \\V &= 0.104 \times 1322.5 = 137.54V\end{aligned}$$



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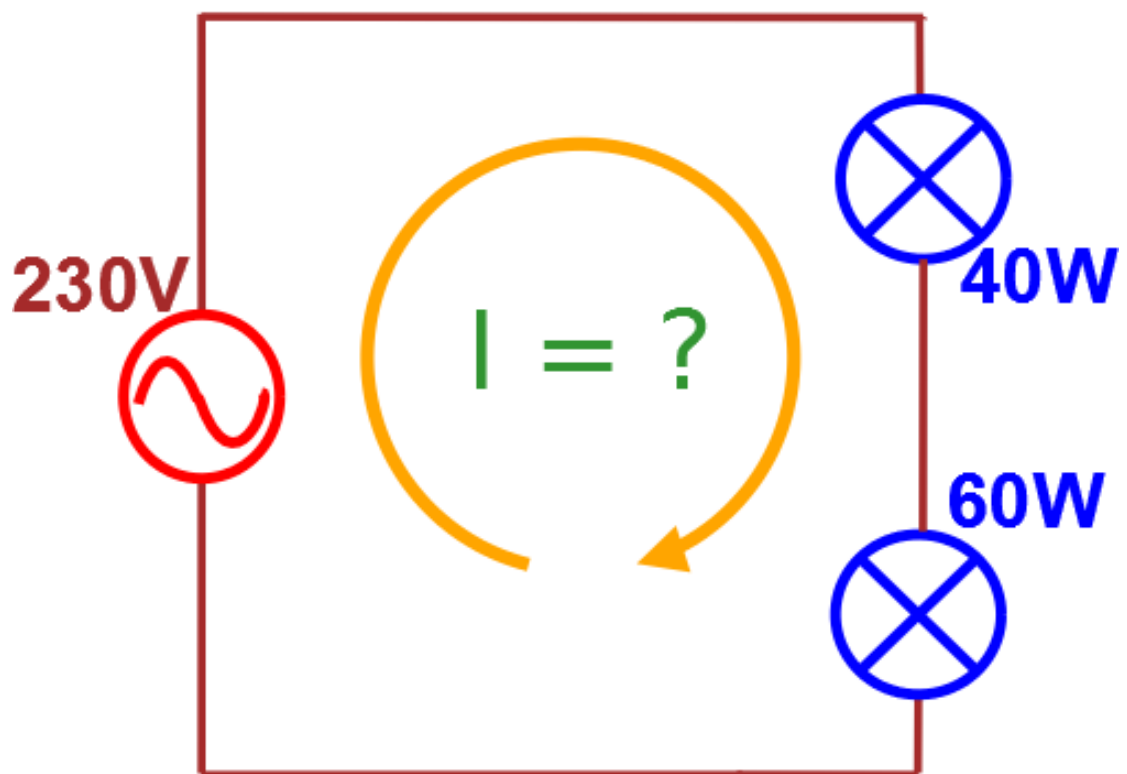
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## Electrical Problem – 55

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$$\begin{aligned} R &= 2204.2 \\ I &= 230/2204.2 \\ I &= 0.104A \end{aligned}$$



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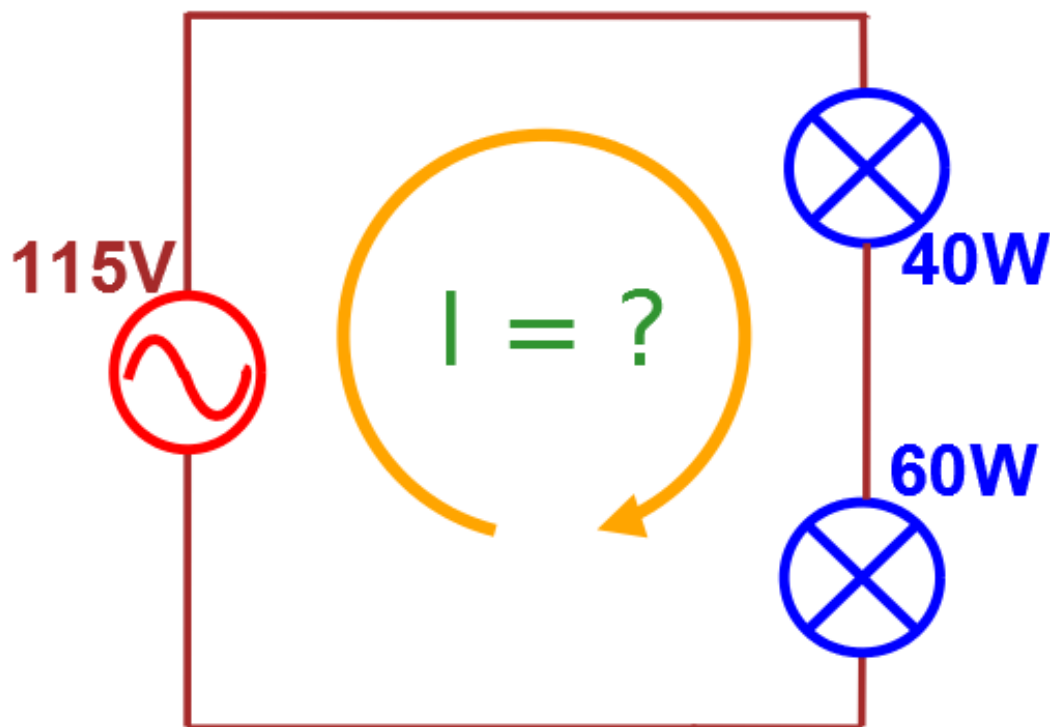
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## Electrical Problem – 56

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1. Do not discuss with any one while solving the problems
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$$R_1 = 230 \times 230 / 40 = 1322.5$$

$$R_2 = 230 \times 230 / 60 = 881.67$$

$$R = 2204.2$$

$$I = 115 / 2204.2 = 0.052A$$



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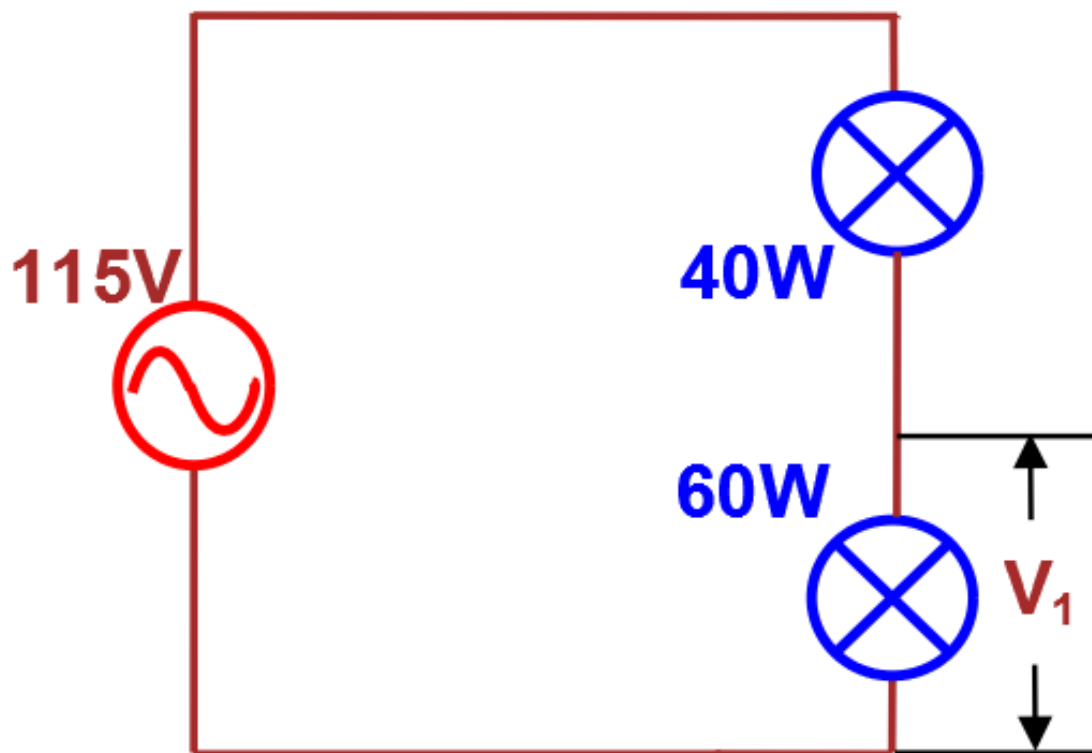
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## Electrical Problem – 57

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$$R1 = 881.67\Omega$$

$$I = 0.052A$$


$$V1 = 0.052 \times 881.67$$

$$V1 = 46V$$



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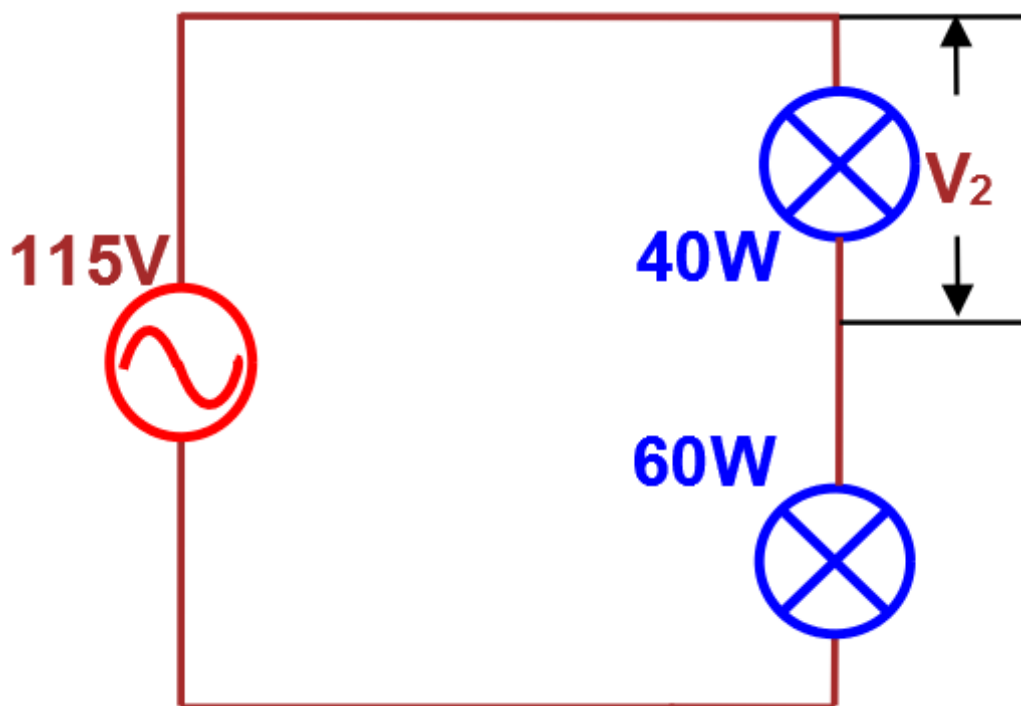
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## Electrical Problem – 58

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$$R = 1322.5\Omega$$

$$I = 0.052A$$

$$V = 69V$$





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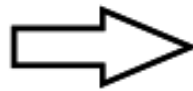
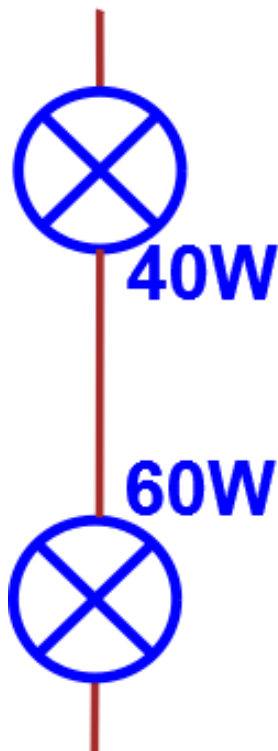
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## Electrical Problem – 59

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$$P = P_1 * P_2 / (P_1 + P_2)$$
$$P = 24W$$



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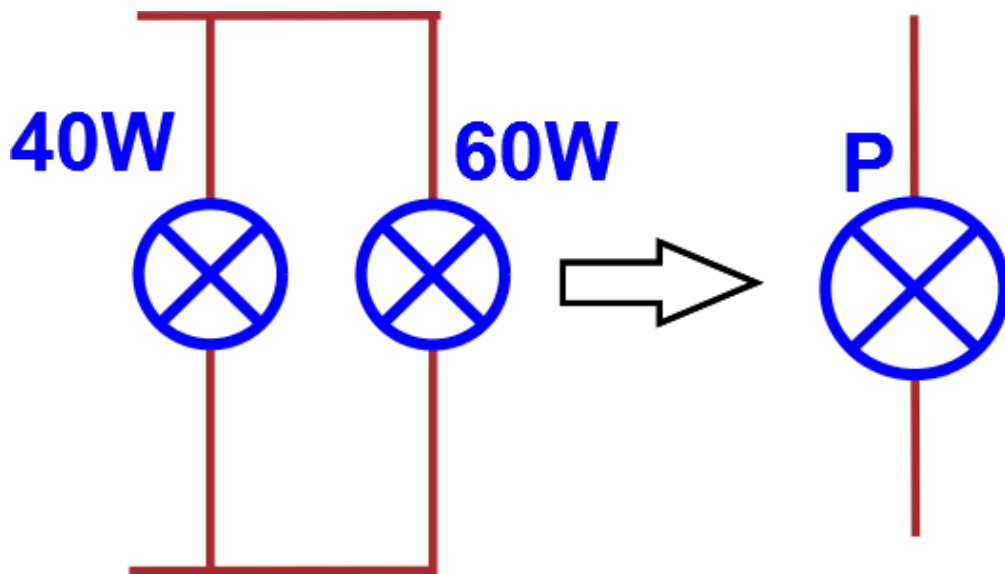
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## Electrical Problem – 60

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$$P = 100W$$