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## Ohm's Law and Power Matrix

| TWO KNOWN VALUES |  | VOLTAGE | CURRENT | RESISTANCE | POWER |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { VOLTAGE } \\ & \mathrm{V} \end{aligned}$ | CURRENT I or A |  |  | $\mathbf{R}=\frac{\mathrm{V}}{\mathrm{I}}$ | $\mathbf{P}=\mathbf{V} \times \mathbf{I}$ |
| VOLTAGE <br> V | RESISTANCE <br> R or $\Omega$ |  | $\mathrm{I}=\frac{\mathrm{V}}{\mathbf{R}}$ |  | $\mathbf{P}=\mathbf{V}^{\mathbf{2}} \div \mathbf{R}$ |
| $\begin{aligned} & \text { VOLTAGE } \\ & \mathrm{V} \end{aligned}$ | POWER <br> P or W |  | $\mathrm{I}=\frac{\mathbf{P}}{\mathbf{V}}$ | $\mathbf{R}=\frac{\mathbf{V}^{\mathbf{2}}}{\mathbf{P}}$ |  |
| CURRENT I or A | $\begin{aligned} & \text { RESISTANCE } \\ & \mathrm{R} \text { or } \Omega \end{aligned}$ | $\mathbf{V}=\mathbf{I} \times \mathbf{R}$ |  |  | $\mathrm{P}=\mathrm{I}^{\mathbf{2}} \times \mathrm{R}$ |
| CURRENT I or A | POWER <br> P or W | $V=\frac{P}{I}$ |  | $\mathbf{R}=\frac{\mathbf{P}}{\mathbf{I}^{\mathbf{2}}}$ |  |
| $\begin{aligned} & \text { RESISTANCE } \\ & \mathrm{R} \text { or } \Omega \end{aligned}$ | POWER <br> P or W | $\mathbf{V}=\sqrt{\mathbf{P} \times \mathbf{R}}$ | $\mathbf{I}=\sqrt{\mathbf{P} \div \mathbf{R}}$ | LearnEle | cs.com |

