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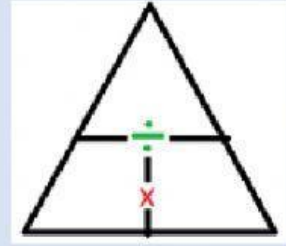
VOLTAGE, CURRENT AND RESISTANCE CALCULATIONS

Voltage in a circuit can be calculated using the equation:

$$\text{VOLTAGE} = \text{CURRENT} \times \text{RESISTANCE}$$

The unit of measurement for Voltage is the Volt (V), for Current, it is Amperes (Amp) and for Resistance it is Ohms (Ω).

Complete the triangle to the right using V, I and R.
(The first line for each answer is for the correct EQUATION).



1a. Calculate the voltage in a circuit where the current is 2A and the resistance is 10 Ohms.

$$\text{Voltage} = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}} \text{ Amps} \times \underline{\hspace{2cm}} \Omega$$

$$= \underline{\hspace{2cm}} \text{ V}$$

b. . Calculate the voltage in a circuit where the current is 50A and the resistance is 2 Ohms.

$$\text{Voltage} = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}} \text{ Amps} \times \underline{\hspace{2cm}} \Omega$$

$$= \underline{\hspace{2cm}} \text{ V}$$

c. Calculate the voltage in a circuit where the current is 64A and the resistance is 80 Ohms.

$$\text{Voltage} = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}} \text{ Amps} \times \underline{\hspace{2cm}} \Omega$$

$$= \underline{\hspace{2cm}} \text{ V}$$

2a. Calculate the current in a circuit where the voltage is 10 V and resistance is 2 Ohms.

$$\text{Current} = \underline{\hspace{2cm}} / \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}} \text{ V} / \underline{\hspace{2cm}} \Omega$$

$$= \underline{\hspace{2cm}} \text{ Amps}$$

b. Calculate the current in a circuit where the voltage is 1320 V and resistance is 11 Ohms.

$$\text{Current} = \underline{\hspace{2cm}} / \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}} \text{ V} / \underline{\hspace{2cm}} \Omega$$

$$= \underline{\hspace{2cm}} \text{ Amps}$$

c. Calculate the current in a circuit where the voltage is 75 V and resistance is 150 Ohms.

$$\begin{aligned}\text{Current} &= \underline{\hspace{2cm}} / \underline{\hspace{2cm}} \\ &= \underline{\hspace{2cm}} \text{ V} / \underline{\hspace{2cm}} \Omega \\ &= \underline{\hspace{2cm}} \text{ Amps}\end{aligned}$$

3a. Calculate the resistance in a circuit where the voltage is 230 V and current is 10 Amps

$$\begin{aligned}\text{Resistance} &= \underline{\hspace{2cm}} / \underline{\hspace{2cm}} \\ &= \underline{\hspace{2cm}} \text{ V} / \underline{\hspace{2cm}} \text{ A} \\ &= \underline{\hspace{2cm}} \Omega\end{aligned}$$

b. Calculate the resistance in a circuit where the voltage is 12 V and current is 1.5 Amps

$$\begin{aligned}\text{Resistance} &= \underline{\hspace{2cm}} / \underline{\hspace{2cm}} \\ &= \underline{\hspace{2cm}} \text{ V} / \underline{\hspace{2cm}} \text{ A} \\ &= \underline{\hspace{2cm}} \Omega\end{aligned}$$

c. Calculate the resistance in a circuit where the voltage is 56 V and current is 8 Amps

$$\begin{aligned}\text{Resistance} &= \underline{\hspace{2cm}} / \underline{\hspace{2cm}} \\ &= \underline{\hspace{2cm}} \text{ V} / \underline{\hspace{2cm}} \text{ A} \\ &= \underline{\hspace{2cm}} \Omega\end{aligned}$$