



R = Resistance in Ohms

I = Current in Amperes

P = Power in Watts

E = Electromotive Force in Volts

Cover the value you need then view the formula. Covering the "R" shows E over I, or E divided by I, which does equal R.

T5C08 What is the formula used to calculate electrical power (P) in a DC circuit?

$$P = E \times I$$

T5C09 How much power is delivered by a voltage of 13.8 volts DC and a current of 10 amperes?

138 watts

T5C10 How much power is delivered by a voltage of 12 volts DC and a current of 2.5 amperes?

30 watts

T5C11 How much current is required to deliver 120 watts at a voltage of 12 volts DC?

10 amperes

T5D01 What formula is used to calculate current in a circuit?

$$I = E / R$$

T5D02 What formula is used to calculate voltage in a circuit?

$$E = I \times R$$

T5D03 What formula is used to calculate resistance in a circuit?

$$R = E / I$$

T5D04 What is the resistance of a circuit in which a current of 3 amperes flows when connected to 90 volts?

30 ohms

T5D05 What is the resistance of a circuit for which the applied voltage is 12 volts and the current flow is 1.5 amperes?

8 ohms

T5D06 What is the resistance of a circuit that draws 4 amperes from a 12-volt source?

3 ohms

T5D07 What is the current flow in a circuit with an applied voltage of 120 volts and a resistance of 80 ohms?

1.5 amperes

T5D08 What is the current through a 100-ohm resistor connected across 200 volts?

2 amperes

T5D09 What is the current through a 24-ohm resistor connected across 240 volts?

10 amperes

T5D10 What is the voltage across a 2-ohm resistor if a current of 0.5 amperes flows through it?

1 volt

T5D11 What is the voltage across a 10-ohm resistor if a current of 1 ampere flows through it?

10 volts

T5D12 What is the voltage across a 10-ohm resistor if a current of 2 amperes flows through it?

20 volts