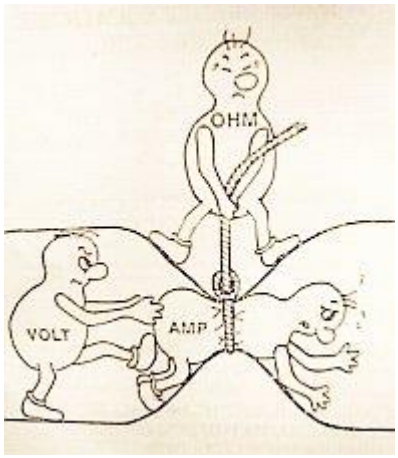
Foundation Ohms Law Practice - QUESTIONS

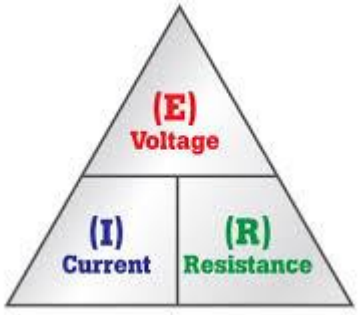
The symbol for Current is 'I' because, it denotes the 'intensity' electron flow and is measured in Amps.

The symbol for Voltage is 'E for Electromotive Force or 'V' for voltage and measured in volts.

The symbol for Resistance is 'R' and is measured in Ohms.

The symbol for Power is 'P' and is measured in watts.





$E = I \times R$ $I = E / R$ $R = E / I$

Complete the tables below.

Voltage (E)	Current (I)	Resistance (R)
12 volts	2 amps	
120 volts		6 M ohms
	500m amps	20 ohms
	6 amps	40 ohms
60 volts		1K ohms
90 volts	3.3 amps	
24volts		6 Ohms
6 Volts	1000 amps	
	3m Amps	3K Ohms
12 volts		.000001 Ohms (Short circuit)

POWER

Power = I x E (Remember: PIE) $I = P / E$ $E = P / I$

$$Power = E^2 / R$$

$$Power = I^2 \times R$$

Power (P)	Voltage (E)	Current (I)	Resistance (R)
	12 volts	12 Amps	
	12 volts		6 ohms
		6 amps	40 ohms
		.5 amps	20 ohms
	24 volts	2m Amps	
15w	12 volts		
		.1 Amps	100 Ohms
		5 amps	10 ohms
25 w	12 volts		
100 w	240 volts		
		1000 amps	1 ohm

If doubling the voltage across a resistor doubles the current through the resistor then

A the resistor value decreased

B. the resistor value did not change

C. the resistor value increased

D. it is impossible to determine the change in the resistor value

If the voltage across a fixed value of resistance is increased five times, what does the current do?

A It increases by a factor of five.

B. It decreases by a factor of five.

C. It stays the same.

D. Not enough information

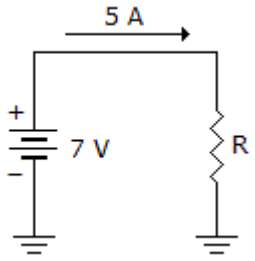
If the resistance in a circuit with constant voltage increases, the current will

A. increase

B. decrease

C. stay the same

D. Not enough information



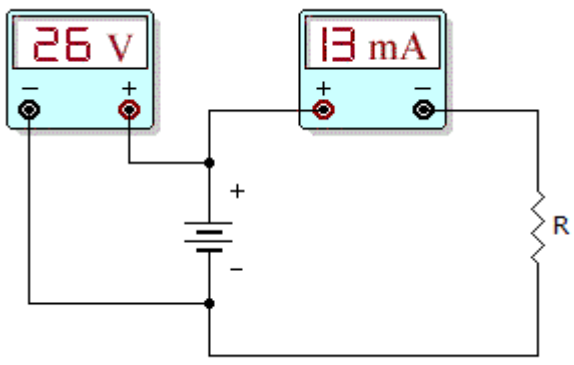
What is the power in the given circuit?

A. 3.6 W

B. 35 W

C. 175 W

D. 245 W



What is the resistor value in the given circuit?

A. 200 Ω

B. 1 k Ω

C. 2 k Ω

D. 4 k Ω

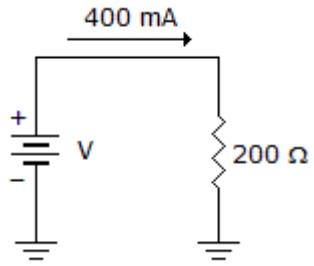
If the voltage doubles across a fixed resistance

A. the current is halved

B. the resistance doubles

C. the current is unchanged

D. The current doubles



What is the power in the given circuit?

A. 32 W

B. 80 W

C. 500 W

D. 16 kW

Ohm's law describes the mathematical relationship between

A. ohms, kilohms, and megohms

B. resistor size and resistor value

C. resistance, voltage, and current

D. none of the above

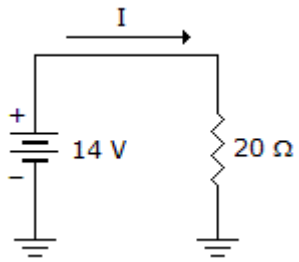
The rate at which work is performed is called

A. current

B. energy

C. power

D. voltage



What is the power in the given circuit?

A. 3.92 kW

B. 280 W

C. 28.6 W

D. 9.8 W

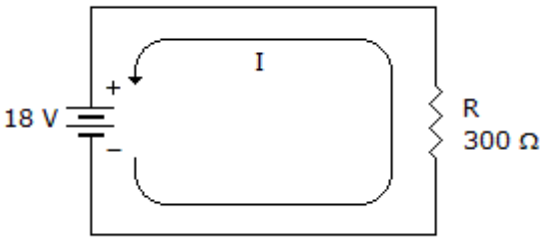
If current through a fixed resistance is halved

A. the resistance is halved

B. the voltage is halved

C. the voltage doubles

D. The current cannot change



If the voltage in the given circuit was cut in half, what would the current equal?

A. 10 mA

B. 30 mA

C. 60 mA

D. 90 mA