

## Answer on Question #43195 – Physics – Electric Circuits

### Question.

What is the name of the physical quantity which is equal to  $v/i$  and define its unit

### Solution.

From the Ohm's law we know the following relationship:

$$I = \frac{V}{R}$$

$I$  is the current through the conductor (unit is ampere – A);

$V$  is the potential difference measured across the conductor (unit is volt – V);

$R$  is the resistance of the conductor in (unit is ohm –  $\Omega$ ).

Therefore,

$$R = \frac{V}{I}$$

So, it's the resistance. Its units are ohms ( $\Omega$ ).

The ohm is defined as a resistance between two points of a conductor when a constant potential difference of 1.0 volt, applied to these points, produces in the conductor a current of 1.0 ampere.

### Answer.

Name of physical quantity is the resistance ( $R$ ).

Its units are ohms ( $\Omega$ ).