Answer on Question 50154, Physics, Electric Circuits   A circuit has a voltage source that delivers 6 V and the circuit uses 3 W of power. What is the resistance of the load?what is the value of the resistance?

Solution

Resistance, voltage and power are related as

$$P = \frac{U^2}{R}$$

Hence, resistance is

$$R = \frac{U^2}{P} = \frac{6^2}{3} = 12\,\Omega$$