

Answer on Question #43166, Physics, Electric Circuits

The resistance of a conductor is $R = \frac{\rho l}{S}$, where ρ is electric resistivity, l is the length of the conductor, S is cross-sectional area.

Thus, if the length is reduced to half, $l \rightarrow \frac{l}{2}$, $R' = \frac{\rho l}{2S} = \frac{R}{2}$. Hence, the resistance will become two times smaller.