

33 The filament of a 240 V, 100 W electric lamp heats up from room temperature to its operating temperature. As it heats up, its resistance increases by a factor of 16.

What is the resistance of the filament at room temperature?

A 36Ω

B 580Ω

C $1.5\text{ k}\Omega$

D $9.2\text{ k}\Omega$

34 Two wires have the same length and the same resistance. Wire X is made of a metal of resistivity: