

32 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 this lamp at room temperature?

A $36\ \Omega$

B $580\ \Omega$

C $1.5\ k\Omega$

D $9.2\ k\Omega$

33 The diagrams show connected wires which carry currents I_1 , I_2 , I_3 and I_4 .