

- 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** $1.5\ \text{k}\Omega$ **D** $9.2\ \text{k}\Omega$

- 33** The diagram shows connected wires which carry currents I_1 , I_2 , I_3 and I_4 .