

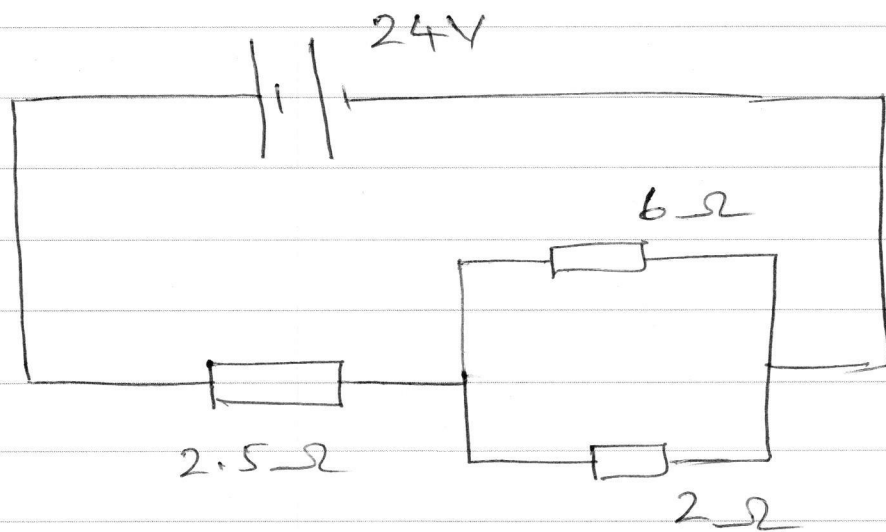
lamp is  $27\text{W}$ .

- (a) Work out the voltage of the battery.

After a while, the room temperature increases to  $30^\circ\text{C}$ . The resistance of the lamp remains the same.

- (b) State and explain what happens to the brightness of the lamp.

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- (a) Calculate the current supplied by the battery.

- (b) Work out the voltage across the ~~the~~  $6\ \Omega$  resistance.  
the  $6\ \Omega$  resistor.