

34 A filament lamp has a resistance of $180\ \Omega$ when the current in it is $500\ \text{mA}$.

What is the power dissipated in the lamp?

A $45\ \text{W}$

B $90\ \text{W}$

C $290\ \text{W}$

D $360\ \text{W}$

35 Two resistors, X and Y , are connected in series. When X is connected in parallel with Y , the power dissipated in Y is $12\ \text{W}$. When X and Y are connected in series, the power dissipated in Y is $3\ \text{W}$. What is the ratio of the resistance of X to the resistance of Y ?