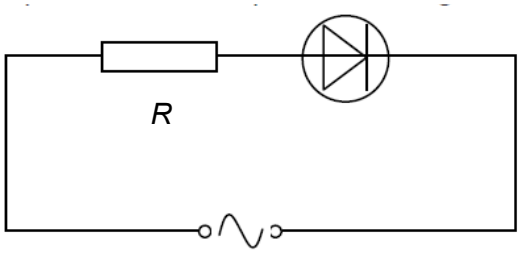
25 A sinusoidal current of peak value I_0 is passed through the circuit shown.



What is the mean rate of heat dissipated in terms of R?

A $1.41\ I_0^2R$

B I_0^2R

C $0.5\ I_0^2R$

D $0.25\ I_0^2R$