The r.m.s. value of an alternating sinusoidal current in a load resistor is 2.0 A and the mean power dissipated in the resistor of resistance R is the same as that of a steady current I in another resistor of resistance $2R$.

What is the value of the steady current I?

A

0.71 A

B

1.4 A

C

2.0 A

D

4.0 A