32 A sinusoidal alternating current has a peak value I_0.

Which expression is correct for the root-mean-square current I_{rms}?

A $I_{rms} = \dfrac{I_0}{2}$

B $I_{rms} = \dfrac{I_0}{\sqrt{2}}$

C $I_{rms} = \sqrt{2I_0}$

D $I_{rms} = 2I_0$

33 A 100% efficient transformer is connected as shown to a sinusoidal a.c. supply