14 20.0 cm^3 of hydrogen peroxide decomposes to water and oxygen in the presence of a suitable catalyst.

160 cm^3 of oxygen, measured at room conditions, is produced in 5.00 minutes.

What is the average rate of decomposition of hydrogen peroxide during this reaction period?

A $2.22 \times 10^{-5}\,mol\,s^{-1}$

B $4.44 \times 10^{-5}\,mol\,s^{-1}$

C $1.76 \times 10^{-4}\,mol\,s^{-1}$

D $2.67 \times 10^{-3}\,mol\,s^{-1}$