NO_2 required for a reaction is produced by the decomposition of N_2O_5 in CCl_4 as per the equation,

$$2N_2O_5(g) \rightarrow 4NO_2(g) + O_2(g).$$

The initial concentration of N_2O_5 is 3.00 mol L^{-1} and it is 2.75 mol L^{-1} after 30 minutes. The rate of formation of NO_2 is : **[April 12, 2019 (II)]**

(a) 4.167×10^{-3} mol L^{-1} min^{-1}

(b) 1.667×10^{-2} mol L^{-1} min^{-1}

(c) 8.333×10^{-3} mol L^{-1} min^{-1}

(d) 2.083×10^{-3} mol L^{-1} min^{-1}