

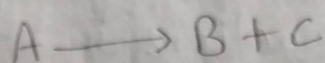
D. B. College (Jaynagar) Lect-5

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Ex. 49 For the given following first order reaction



Time

$T = \infty$

Total pressure of A + B + C

P_2

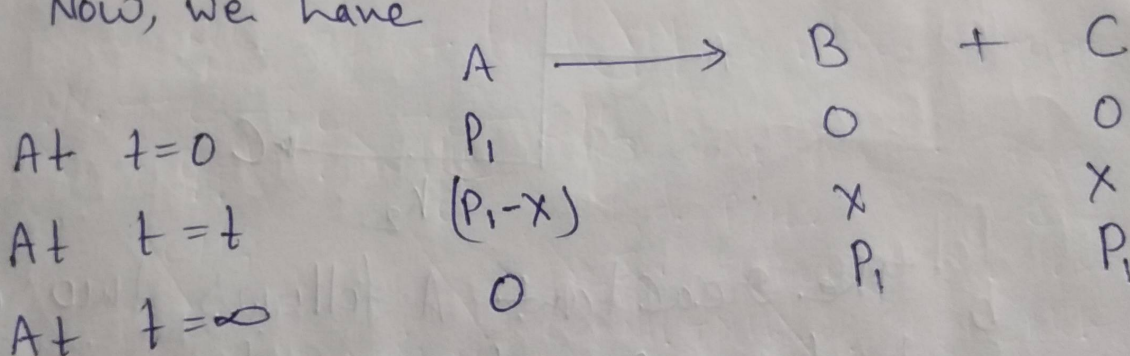
P_3

Calculate k .

Sol.ⁿ

Here ∞ means that the reaction is complete.

Now, we have



$$\therefore 2P_1 = P_3$$

$$\Rightarrow P_1 = \frac{P_3}{2}$$

At time t ,

$$P_1 + x = P_2$$

$$\Rightarrow \frac{P_3}{2} + x = P_2 \Rightarrow x = P_2 - \frac{P_3}{2}$$