

Answer on Question# 57756 - < Chemistry > - < General chemistry >

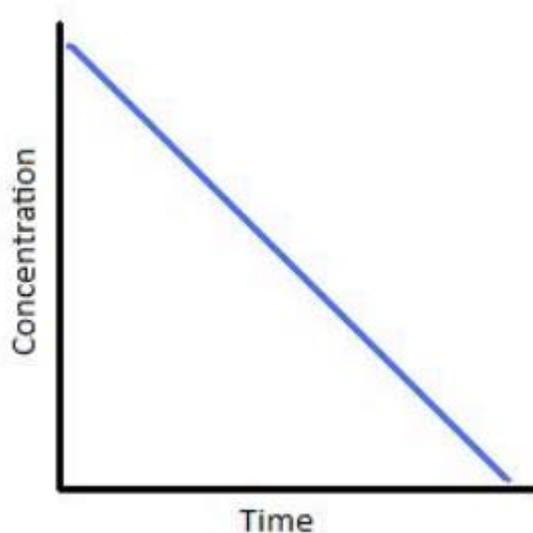
In terms of rate law which type of plot would be consistent with zero order, first order and second order.

Solution

1) Integrated form of the zeroth order rate law is:

$$[A] = [A]_0 - kt.$$

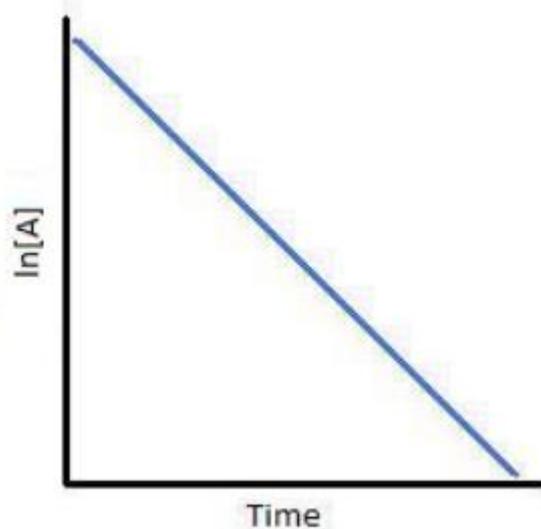
Concentration vs. time plot of a zero-order reaction is:



2) Integrated form of the first order rate law is:

$$\ln[A] = \ln[A]_0 - kt.$$

The consistent type of plot is:



3) Integrated form of the second order rate law is:

$$\frac{1}{[A]} = \frac{1}{[A]_0} + kt.$$

The consistent type of plot is:

