Answer on Question #68602 - Chemistry - Physical Chemistry

Question:

In 5 sec. 80% of reaction is complete. If reaction is 1st order then calculate rate constant.

Answer:

$$[A] = [A]_0 \cdot e^{-kt}$$
$$k = -\frac{\ln\frac{[A]}{[A]_0}}{t} = -\frac{\ln(0.2)}{5} = 0.322 \ (sec^{-1})$$

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