

1. The reaction of reactant A is zero order. If the initial concentration for the reactant was 0.545 M and the half-life is 236 s, answer the following questions:

A) How much time is required to reduce the initial concentration of the reactant by 65.5 %?

B) How much reactant remains after 6.78 min?

C) How much reactant will remain after 4 half-lives?

D) At what time will the reaction be over?

2. The decomposition of reactant B is zero order. In an initial rate experiment, 0.459 M reactant decomposed with an initial rate of 3.52×10^{-3} M/s. With this information, answer the following questions:

A) What is the half-life of the reactant?

B) How much time is required to reduce the initial concentration of the reactant by 12.5%?

C) At what time will the reaction be over?

D) In a separate experiment, 0.213 M reactant remained after 57 s. What was the initial concentration of the reactant?