Worksheet: Chemical Kinetics

IB · Class 12 · Chemistry · 5 questions · 13 marks

Name: _____ Date: _____ Score: _____ / 13

Q1. The half-life of a reaction is inversely proportional to the initial concentration. What is the order? *[2 marks]*

Q2. A first-order reaction has k = 1.0e-3 s^-1. Find t_half and the time for 75% completion. *[3 marks]*

Q3. A zero-order reaction has k = 0.04 mol/L/s with initial concentration 1 M. Find t_half and time for 90% completion. *[3 marks]*

Q4. Doubling [A] doubles the rate; doubling [B] quadruples it. Write the rate law and overall order. *[2 marks]*

Q5. k = 2.0e-3 s^-1 at 300 K and 8.0e-3 s^-1 at 400 K. Find Ea. *[3 marks]*