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ASSIGNMENT

1. The total time for a second order reaction is

1/At = 1/Ao + Kt -------(i)

For the half-life, t = t1/2, A = A0/2

Substituting the values into equation (i)

1/Ao/2 = 1/Ao + Kt1/2

2/Ao = 1/Ao + Kt1/2

Kt1/2 = 2/Ao – 1/Ao

Kt1/2 = 1/Ao

T1/2 = 1/K[1/Ao]

T1/2 = 1/K[Ao]-----------(ii)

From the equation above, it can be concluded that the half life of a second order reaction is concentration dependent.