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# Scheme-5 Reactor-2

*Part-2, Case-3*

*tend = 720 sec  
k1 = 0.1, k2 = 0.01*

*NBt/NA<sub>t</sub> = 1.66371*

*Exponent a = 1.5  
Exponent b = 0.5  
Exponent c = 0.5  
Exponent d = 1.5*

*WA = 200  
WB = 83.1856  
NBt = 4.43657  
Vt = 2.14159  
Tot.Solv. = 2  
Sola/(SolR+Sola) = 0.5*

*CA0 = 1.24518  
CB0 = 2.07162*

*Total input = 283.186 kg  
Total output = 283.187 kg*

*Chemical Balance Error = 0.00179656 kg (% 6.34411e-06)*

*Solver: Explicit Runge-Kutta (4,5) Variable step (Dormand-Prince Pair)  
Error tolerance: 0.1%*

*Final Concentrations with Step Size limited to 0.01*

*CA (final) = 0.01245  
CB (final) = -5.71845e-12  
CR (final) = 0.393839  
CS (final) = 0.83889*

*CA @ 360.0s = 0.0128772  
CB @ 360.0s = 0.00793762  
CR @ 360.0s = 0.400922  
CS @ 360.0s = 0.83138*

*Final Concentrations with Step Size limited to 0.1*

*CA (final) = 0.01245  
CB (final) = 2.74643e-09  
CR (final) = 0.393839  
CS (final) = 0.83889*

