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# Scheme-7 Reactor-2

*Part-3, Case-1*

*tend = 360 sec  
k1 = 0.1, k2 = 0.002*

*NBt/NA<sub>t</sub> = 1.14974*

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

*WA = 200  
WB = 57.4868  
NBt = 3.06596  
Vt = 2.12874  
Tot.Solv. = 2  
Sola/(SolR+Sola) = 0.5*

*CA0 = 1.2527  
CB0 = 1.44027*

*Total input = 257.487 kg  
Total output = 257.487 kg*

*Chemical Balance Error = 0.000168 kg (% 6.52462e-07)*

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

*Final Concentrations with Step Size limited to 0.001*

*CA (final) = 0.0125268  
CB (final) = 0.121181  
CR (final) = 1.16125  
CS (final) = 0.07892*

*CA @ 180.0s = 0.0319122  
CB @ 180.0s = 0.160452  
CR @ 180.0s = 1.16175  
CS @ 180.0s = 0.0590349*

*Final Concentrations with Step Size limited to 0.01*

*CA (final) = 0.0125268  
CB (final) = 0.121181  
CR (final) = 1.16125  
CS (final) = 0.07892*

