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# Scheme-9 Reactor-2

*Part-2, Case-1*

*tend = 360 sec  
k1 = 0.1, k2 = 0.01*

*NBt/NA<sub>t</sub> = 1.54413*

*Exponent a = 1.5  
Exponent b = 0.5  
Exponent c = 1  
Exponent d = 1*

*WA = 200  
WB = 77.2063  
NBt = 4.11767  
Vt = 2.1386  
Tot.Solv. = 2  
Sola/(SolR+Sola) = 0.5*

*CA0 = 1.24692  
CB0 = 1.9254*

*Total input = 277.206 kg  
Total output = 277.208 kg*

*Chemical Balance Error = 0.00138941 kg (% 5.01219e-06)*

*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) = 0.0124715  
CB (final) = 0.0412703  
CR (final) = 0.584767  
CS (final) = 0.649682*

*CA @ 180.0s = 0.0241385  
CB @ 180.0s = 0.143655  
CR @ 180.0s = 0.663817  
CS @ 180.0s = 0.558964*

*Final Concentrations with Step Size limited to 0.01*

*CA (final) = 0.0124715  
CB (final) = 0.0412703  
CR (final) = 0.584767  
CS (final) = 0.649682*

