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# Scheme-7 Reactor-2

*Part-1, Case-1*

*tend = 6 sec  
k1 = 100, k2 = 10*

*NBt/NA<sub>t</sub> = 1.1393*

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

*WA = 200  
WB = 56.965  
NBt = 3.03813  
Vt = 2.12848  
Tot.Solv. = 2  
Sola/(SolR+Sola) = 0.5*

*CA0 = 1.25285  
CB0 = 1.42737*

*Total input = 256.965 kg  
Total output = 256.965 kg*

*Chemical Balance Error = 0.000398135 kg (% 1.54937e-06)*

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

*Final Concentrations with Step Size limited to 0.0001*

*CA (final) = 0.0125293  
CB (final) = 7.84388e-12  
CR (final) = 1.05327  
CS (final) = 0.187051*

*CA @ 3.0s = 0.0125293  
CB @ 3.0s = 1.8493e-11  
CR @ 3.0s = 1.05327  
CS @ 3.0s = 0.187051*

*Final Concentrations with Step Size limited to 0.001*

*CA (final) = 0.0125293  
CB (final) = -1.32482e-09  
CR (final) = 1.05327  
CS (final) = 0.187051*

