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# Scheme-6 Reactor-2

*Part-1, Case-2*

*tend = 60 sec  
k1 = 100, k2 = 10*

*NBt/NA<sub>t</sub> = 1.12131*

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

*WA = 200  
WB = 56.0655  
NBt = 2.99016  
Vt = 2.12803  
Tot.Solv. = 2  
Sola/(SolR+Sola) = 0.5*

*CA0 = 1.25311  
CB0 = 1.40513*

*Total input = 256.065 kg  
Total output = 256.066 kg*

*Chemical Balance Error = 0.000350137 kg (% 1.36737e-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) = 0.0125233  
CB (final) = 2.35534e-06  
CR (final) = 1.07605  
CS (final) = 0.164536*

*CA @ 30.0s = 0.0125269  
CB @ 30.0s = 9.28835e-06  
CR @ 30.0s = 1.07605  
CS @ 30.0s = 0.164532*

*Final Concentrations with Step Size limited to 0.001*

*CA (final) = 0.0125233  
CB (final) = 2.35534e-06  
CR (final) = 1.07605  
CS (final) = 0.164536*

