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# Scheme-3 Reactor-2

*Part-2, Case-3*

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

*NBt/NA<sub>t</sub> = 1.44783*

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

*WA = 200  
WB = 72.3916  
NBt = 3.86089  
Vt = 2.1362  
Tot.Solv. = 2  
Sola/(SolR+Sola) = 0.5*

*CA0 = 1.24833  
CB0 = 1.80737*

*Total input = 272.392 kg  
Total output = 272.393 kg*

*Chemical Balance Error = 0.00122091 kg (% 4.48218e-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) = 0.0124925  
CB (final) = 1.86101e-12  
CR (final) = 0.664299  
CS (final) = 0.571533*

*CA @ 360.0s = 0.0124925  
CB @ 360.0s = 2.75624e-12  
CR @ 360.0s = 0.664299  
CS @ 360.0s = 0.571533*

*Final Concentrations with Step Size limited to 0.01*

*CA (final) = 0.0124925  
CB (final) = -3.80399e-12  
CR (final) = 0.664299  
CS (final) = 0.571533*

