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| ;Computer lab 3:1  METHOD RK4  STARTTIME = 0  STOPTIME = 100  DT = 0.02  Dose = 100  V = 100 ; L  CL = 10 ; L/h  k = CL/V  ka = 2  t\_lag = 2  ;Differential equations  d/dt(D) = -ka\*D ; First order absorption  d/dt(A1) = ka\*D - k\*A1  C = delay(A1/V,t\_lag) ; Concentration, the time delay is introduced  ; with the built in delay function.  init D=Dose  init A1=0 |

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| ;Computer lab 3:2  METHOD RK4  STARTTIME = 0.01  STOPTIME = 50  DT = 0.02  Dose = 100  V = 100 ; L  CL = 10 ; L/h  k = CL/V  ka = 2  t\_lag = 2  {Classical lagtime model}  d/dt(D1) = -ka\*D1 ; First order absorption  d/dt(A1) = ka\*D1 - k\*A1  C1 = delay(A1/V,t\_lag) ; Concentration  init D1=Dose  init A1=0  {Absorption delay with transit compartments}  MTT = 2  NN = 500  ktr = (NN+1)/MTT  ; lnfac = logn(sqrt(2\*PI))+(NN+0.5)\*logn(NN)-NN  ;Differential equations  d/dt(D2) = EXP(LOGN(Dose)+LOGN(ktr)+NN\*LOGN(ktr\*TIME)-ktr\*TIME-NN\*LOGN(NN)+NN-0.5\*LOGN(2\*PI\*NN))-ka\*D2  ;d/dt(D2) = EXP(LOGN(Dose)+NN\*LOGN(ktr\*TIME)-ktr\*TIME+LOGN(ktr)-lnfac)-ka\*D2  d/dt(A2) = ka\*D2 - k\*A2  C2 = A2/V    init D2 = 0  init A2 = 0 |