(a) Disjoint-parameter benchmark setup

Process 1

\[ A_1 x_1 A_2 - \]

Process 2

\[ B_1 x_2 B_2 x_3 B_3 x_4 x_5 \]

Process 3

\[ C_1 x_6 C_2 x_7 \]

(b) Shared-parameter benchmark setup

Process 1

\[ D_1 x_1 D_2 x_2 \]

Process 2

\[ E_1 x_2 E_2 x_3 E_3 x_4 x_5 \]

Process 3

\[ F_1 x_6 F_2 x_3 x_7 \]

(c) Raven setup

Process 1

\((\text{Infiltration})\)

\[ M_1 x_1 x_{29} M_2 x_2 x_{29} M_3 x_3 x_{29} \]

Process 2

\((\text{Quickflow})\)

\[ N_1 x_4 x_{29} N_2 x_5 x_6 x_{29} N_3 x_7 x_{29} \]

Process 3

\((\text{Evaporation})\)

\[ O_1 x_8 x_{29} O_2 x_9 x_{10} x_{29} \]

Process 4

\((\text{Baseflow})\)

\[ P_1 x_{11} P_2 \]

Process 5

\((\text{Snow balance})\)

\[ Q_1 x_{13} \quad \quad Q_2 - \quad \quad Q_3 x_{18} x_{19} \]

Process 6

\((\text{Surface runoff convol.})\)

\[ R_1 x_{20} x_{21} \]

Process 7

\((\text{Delayed runoff convol.})\)

\[ S_1 x_{22} x_{23} \]

Process 8

\((\text{Potential melt})\)

\[ T_1 x_{24} x_{27} \]

Process 9

\((\text{Percolation})\)

\[ U_1 x_{28} x_{29} x_{30} x_{35} \]

Process 10

\((\text{Rain-snow partitioning})\)

\[ V_1 x_{31} x_{32} \]

Process 11

\((\text{Precipitation correction})\)

\[ W_1 x_{33} x_{34} \]

Process 12

\((\text{Remainder})\)

\[ X_1 - \]