

## Equation assignment sequence for variable $s$

no	var	equ	quations	token
29	18	-	$M^{A,\beta}_N :: \text{port variable}$	
28	17	-	$M^{A,\alpha}_N :: \text{port variable}$	
27	20	-	$M^{B,\delta}_N :: \text{port variable}$	
26	19	-	$M^{B,\gamma}_N :: \text{port variable}$	
25	14	-	$K^{A,\beta}_A :: \text{port variable}$	
24	13	-	$K^{A,\alpha}_A :: \text{port variable}$	
23	16	-	$K^{B,\delta}_A :: \text{port variable}$	
22	8	-	$F_{N,A} :: \text{port variable}$	
21	36	-	$D_{N,A} :: \text{port variable}$	
20	15	-	$K^{B,\gamma}_A :: \text{port variable}$	
19	3	-	$\# :: \text{port variable}$	
18	1	-	$t :: \text{port variable}$	
17	22	8	$\pi^{A,\beta}_N := M^{A,\beta}_N . x_N$	
16	76	63	$u_A := \text{Instantiate}(u_A, \#)$	
15	21	7	$\pi^{A,\alpha}_N := M^{A,\alpha}_N . x_N$	
14	24	10	$\pi^{B,\delta}_N := M^{B,\delta}_N . y_N$	
13	23	9	$\pi^{B,\gamma}_N := M^{B,\gamma}_N . y_N$	
12	26	12	$\hat{x}^{A,\beta}_N := F_{N,A} \overset{A}{\star} \left( K^{A,\beta}_A . D_{N,A} \overset{N}{\star} \pi^{A,\beta}_N \right)$	

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no	var	equ	quations	token
11	25	11	$\hat{x}^{A,\alpha}_N := F_{N,A} \overset{A}{\star} \left( u_A \cdot K^{A,\alpha}_A \cdot D_{N,A} \overset{N}{\star} \pi^{A,\alpha}_N \right)$	
10	28	15	$\hat{y}^{B,\delta}_N := F_{N,A} \overset{A}{\star} \left( K^{B,\delta}_A \cdot D_{N,A} \overset{N}{\star} \pi^{B,\delta}_N \right)$	
9	27	14	$\hat{y}^{B,\gamma}_N := F_{N,A} \overset{A}{\star} \left( K^{B,\gamma}_A \cdot D_{N,A} \overset{N}{\star} \pi^{B,\gamma}_N \right)$	
8	29	16	$\dot{x}_N := \hat{x}^{A,\alpha}_N + \hat{x}^{A,\beta}_N$	
7	11	5	$x^o_N := \text{Instantiate}(x_N, \#)$	
6	7	4	$t_e := \text{Instantiate}(t, \#)$	
5	6	3	$t_o := \text{Instantiate}(t, \#)$	
4	30	17	$\dot{y}_N := \hat{y}^{B,\gamma}_N + \hat{y}^{B,\delta}_N$	
3	12	6	$y^o_N := \text{Instantiate}(y_N, \#)$	
2	9	20	$x_N := \int_{t_o}^{t_e} \dot{x}_N \, dt + x^o_N$	
1	10	21	$y_N := \int_{t_o}^{t_e} \dot{y}_N \, dt + y^o_N$	
0	34	31	$s := \text{MixedStack}(x_N, y_N)$	