

## Equation assignment sequence for variable $s$

no	var	equ	quations	token
33	18	-	$M^{A,\beta}_N :: \text{port variable}$	
32	17	-	$M^{A,\alpha}_N :: \text{port variable}$	
31	20	-	$M^{B,\delta}_N :: \text{port variable}$	
30	3	-	$\# :: \text{port variable}$	
29	19	-	$M^{B,\gamma}_N :: \text{port variable}$	
28	14	-	$K^{A,\beta}_A :: \text{port variable}$	
27	13	-	$K^{A,\alpha}_A :: \text{port variable}$	
26	16	-	$K^{B,\delta}_A :: \text{port variable}$	
25	36	-	$D_{N,A} :: \text{port variable}$	
24	15	-	$K^{B,\gamma}_A :: \text{port variable}$	
23	8	-	$F_{N,A} :: \text{port variable}$	
22	1	-	$t :: \text{port variable}$	
21	22	28	$\pi^{A,\beta}_N := \text{Instantiate}(\pi^{A,\beta}_N, \#)$	
20	22	8	$\pi^{A,\beta}_N := M^{A,\beta}_N . x_N$	
19	76	63	$u_A := \text{Instantiate}(u_A, \#)$	
18	21	7	$\pi^{A,\alpha}_N := M^{A,\alpha}_N . x_N$	
17	21	27	$\pi^{A,\alpha}_N := \text{Instantiate}(\pi^{A,\alpha}_N, \#)$	
16	24	30	$\pi^{B,\delta}_N := \text{Instantiate}(\pi^{B,\delta}_N, \#)$	
15	24	10	$\pi^{B,\delta}_N := M^{B,\delta}_N . y_N$	

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no	var	equ	quations	token
14	23	29	$\pi^{B,\gamma}_N := \text{Instantiate}(\pi^{B,\gamma}_N, \#)$	
13	23	9	$\pi^{B,\gamma}_N := M^{B,\gamma}_N \cdot y_N$	
12	81	76	$\hat{x}^{A,\beta}_A := K^{A,\beta}_A \cdot D_{N,A} \star^N \pi^{A,\beta}_N$	
11	80	75	$\hat{x}^{A,\alpha}_A := u_A \cdot K^{A,\alpha}_A \cdot D_{N,A} \star^N \pi^{A,\alpha}_N$	
10	83	78	$\hat{y}^{B,\delta}_A := K^{B,\delta}_A \cdot D_{N,A} \star^N \pi^{B,\delta}_N$	
9	82	77	$\hat{y}^{B,\gamma}_A := K^{B,\gamma}_A \cdot D_{N,A} \star^N \pi^{B,\gamma}_N$	
8	26	12	$\hat{x}^{A,\beta}_N := F_{N,A} \star^A \hat{x}^{A,\beta}_A$	
7	25	11	$\hat{x}^{A,\alpha}_N := F_{N,A} \star^A \hat{x}^{A,\alpha}_A$	
6	28	15	$\hat{y}^{B,\delta}_N := F_{N,A} \star^A \hat{y}^{B,\delta}_A$	
5	27	14	$\hat{y}^{B,\gamma}_N := F_{N,A} \star^A \hat{y}^{B,\gamma}_A$	
4	29	16	$\dot{x}_N := \hat{x}^{A,\alpha}_N + \hat{x}^{A,\beta}_N$	
3	30	17	$\dot{y}_N := \hat{y}^{B,\gamma}_N + \hat{y}^{B,\delta}_N$	
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	$s := \text{MixedStack}(x_N, y_N)$	