## Equation assignment sequence for variable $\hat{w}_N$

no	var	equ	quations	token
87	$V_147$	_	$P_{NK}$ :: port variable	
86	$V_155$	-	B:: port variable	
85	$V_127$	_	$1_S$ :: port variable	
84	$V_38$	_	$K^{o}_{K}$ :: port variable	
83	$V_33$	_	$P_{K,NK}$ :: port variable	
82	$V_158$	_	$N_{K,KS}$ :: port variable	
81	$V_14$	_	$S_N$ :: port variable	
80	$V_24$	_	$A^v$ :: port variable	
79	$V_91$	_	$D_{NS,AS}$ :: port variable	
78	V <sub>3</sub> 6	_	$P_{NS,KS}$ :: port variable	
77	$V_35$	_	$P_{N,NK}$ :: port variable	
76	$V_10$	_	$r_{xN}$ :: port variable	
75	$V_40$	_	$\lambda_S$ :: port variable	
74	$V_12$	_	$r_{zN}$ :: port variable	
73	$V_11$	_	$r_{yN}$ :: port variable	
72	$V_15$	_	$V_N$ :: port variable	
71	$V_13$	_	$U_N :: $ port variable	
70	$V_5$	_	t:: port variable	
69	$V_90$	_	$D_{N,A}::$ port variable	

no	var	equ	quations	token
68	V <sub>7</sub> 0	-	$F_{NS,AS}$ :: port variable	
67	$V_1$	_	# :: port variable	
66	$V_8$	_	$F_{N,A}$ :: port variable	
65	$V_67$	$E_45$	$c_{NS} := c_{NS}$	
64	$V_152$	$E_124$	$c^{o}_{NK,KS} := \text{Instantiate}(c_{NK,KS}, \#)$	
63	$V_151$	$E_123$	$c_{NK,KS} := P_{NK} \cdot \left( P_{NS,KS} \overset{NS}{\star} c_{NS} \right)$	
62	$V_44$	$E_23$	$k_{xN}^q := (V_N)^{-1} \cdot \frac{\partial U_N}{\partial T_N} \cdot v_{xN}$	
61	$V_52$	$E_31$	$k_{xNS}^d := (\mu_{NS})^{-1} \cdot \left( v_{xN} \odot \left( (V_N)^{-1} \odot \frac{\partial U_N}{\partial \mu_{NS}} \right) \right)$	
60	$V_{6}$ 2	$E_41$	$E^{a}_{NK} := Instantiate(R.T_{NK}, \#)$	
59	$V_60$	E <sub>3</sub> 9	$T_{NK} := P_{N,NK} \stackrel{N}{\star} T_N$	
58	$V_157$	$E_127$	$R := A^v \cdot B$	
57	$V_153$	$E_125$	$x_{NK,KS} := (c^o_{NK,KS})^{-1} \cdot c_{NK,KS}$	
56	$V_2$	$ ight  E_1$	1 := Instantiate(#, #)	
55	V <sub>1</sub> 68	$E_134$	$n_{tN} := 1_S \overset{S \in NS}{\star} n_{NS}$	
54	$V_165$	$E_132$	$boz_N := \operatorname{Instantiate}(S_N, \#)$	
53	$V_41$	$E_20$	$\lambda_S := \lambda_S$	
52	V <sub>7</sub> 6	$E_53$	$k_{xN}^q := k_{xN}^q$	
51	V <sub>8</sub> 6	$E_63$	$k_{xNS}^d := k_{xNS}^d$	
50	$V_63$	$E_42$	$K_{NK} := K^o{}_K \odot exp((-E^a{}_{NK}) \cdot (R \cdot T_{NK})^{-1})$	
49	V <sub>1</sub> 60	$E_{1}29$	$\phi_{NK} := \prod_{KS} x_{NK,KS}^{N_{NK,KS}}$	

no	var	equ	quations	token
48	V <sub>1</sub> 59	E <sub>1</sub> 28	$N_{NK,KS} := P_{K,NK} \stackrel{K}{\star} N_{K,KS}$	
47	$V_171$	$E_138$	$s := 0.5 \cdot (1 + \text{sign}(t^o))$	
46	V <sub>1</sub> 8	$ ight $ $ m E_7$	$T_N := \frac{\partial U_N}{\partial S_N}$	
45	V <sub>1</sub> 69	$E_135$	$\xi_{NS} := (n_{tN})^{-1} \odot n_{NS}$	
44	V <sub>1</sub> 66	$E_133$	$R_N := A^v \cdot boz_N$	
43	$V_57$	E <sub>3</sub> 6	$m_N := \lambda_S \overset{S \in NS}{\star} n_{NS}$	
42	$V_95$	$E_70$	$\hat{H}^d{}_A := \left(F_{NS,AS} \overset{NS}{\star}{}_{hNS}\right) \overset{S \in AS}{\star} \hat{n}^d{}_{AS}$	
41	V <sub>1</sub> 06	$E_81$	$\hat{q}_{xA} := A_{yzN} \cdot k_{xN}^q \cdot D_{N,A} \stackrel{N}{\star} T_N$	
40	$V_93$		$\hat{n}^d_{AS} := A_{yzN} \odot \left( -k_{xNS}^d \right) \cdot D_{NS,AS} \overset{NS}{\star} \mu_{NS}$	
39	$V_163$	$E_130$	$\tilde{n}_{NS} := V_N \overset{N}{\star} \left( P_{N,NK} \overset{NK}{\star} \left( (K_{NK} \cdot \phi_{NK}) \cdot \left( P_{NS,KS} \overset{KS}{\star} N_{NK,KS} \right) \right) \right)$	
38	$V_172$	$E_{1}39$	s := s	
37	$V_28$	$E_15$	$v_{xN} := \frac{\partial r_{xN}}{\partial t}$	
36	$V_19$	$E_{1}36$	$\mu_{NS} := (R_N \cdot T_N) \odot ln(\xi_{NS})$	
35	$V_19$	$E_8$	$\mu_{NS} := \frac{\partial U_N}{\partial n_{NS}}$	
34	$V_58$	$E_37$	$m_N := m_N$	
33	V <sub>9</sub> 6	$E_71$	$\hat{H}^d{}_N := F_{N,A} \stackrel{A}{\star} \hat{H}^d{}_A$	
32	$V_107$	$E_82$	$\hat{q}_N := F_{N,A} \stackrel{A}{\star} \hat{q}_{xA}$	
31	$V_103$	$E_78$	$\hat{H}^c{}_N := F_{N,A} \stackrel{A}{\star} \hat{H}^c{}_A$	
30	$V_{9}4$	$E_69$	$\hat{n}^d_{NS} := F_{NS,AS} \stackrel{AS}{\star} \hat{n}^d_{AS}$	
29	V <sub>1</sub> 64	$E_131$	$\tilde{n}_{NS} := \tilde{n}_{NS}$	

no	var	equ	quations	token
28	V <sub>1</sub> 00	$E_75$	$\hat{n}^c{}_{NS} := F_{NS,AS} \stackrel{AS}{\star} \hat{n}^c{}_{AS}$	
27	$V_173$	$E_141$	$\hat{n}^{c,controlled}_{AS} := s \cdot \hat{n}^{c}_{AS}$	
26	$V_48$	$E_27$	$k_{xN}^c := \left(\lambda_S \overset{S \in NS}{\star} (\mu_{NS})^{-1}\right) \cdot (V_N)^{-1} \cdot \frac{\partial U_N}{\partial p_N} \cdot v_{xN}$	
25	$V_59$	$E_38$	$\rho_N := m_N \cdot (V_N)^{-1}$	
24	$V_108$	$E_83$	$\dot{H}_N := \hat{H}^c{}_N + \hat{H}^d{}_N + \hat{q}_N + \hat{w}_N$	
23	$V_7$	$E_5$	$t^e := \operatorname{Instantiate}(t, \#)$	
22	$V_6$	$\mathbf{E_4}$	$t^o := \operatorname{Instantiate}(t, \#)$	
21	$V_110$	$E_85$	$n^o_{NS} := \text{Instantiate}(n_{NS}, \#)$	
20	$V_101$	E <sub>7</sub> 6	$\dot{n}_{NS} := \hat{n}^c{}_{NS} + \hat{n}^d{}_{NS} + \tilde{n}_{NS}$	
19	$V_101$	$E_142$	$\dot{n}_{NS} := F_{NS,AS} \stackrel{AS}{\star} \operatorname{Stack} \left( \hat{n}^{c}_{AS}, \hat{n}^{c,controlled}_{AS} \right)$	
18	$V_97$	$E_72$	$d_A := \operatorname{sign}\left(F_{N,A} \stackrel{N}{\star} p_N\right)$	
17	V <sub>6</sub> 6	$E_44$	$c_{NS} := (V_N)^{-1} \odot n_{NS}$	
16	$V_4$	$E_3$	0.5 := Instantiate(#, #)	
15	V <sub>8</sub> 1	$E_58$	$k_{xN}^c := k_{xN}^c$	
14	$V_74$	$E_51$	$ ho_N :=  ho_N$	
13	$V_71$	$E_48$	$A_{yzN} := r_{yN} \cdot r_{zN}$	
12	$V_17$	$\rm E_6$	$p_N := \left(-\frac{\partial U_N}{\partial V_N}\right)$	
11	$V_20$	$\mathbb{E}_9$	$H_N := U_N - p_N \cdot V_N$	
10	$V_20$	$E_87$	$H_N := \int_{t^o}^{t^e} \dot{H}_N \ dt$	
9	V <sub>1</sub> 6	E <sub>8</sub> 6	$n_{NS} := \int_{t^o}^{t^e} \dot{n}_{NS} \ dt + n^o_{NS}$	

no	var	equ	quations	token
8	V <sub>9</sub> 8	E <sub>7</sub> 3	$c_{AS} := (0.5 \cdot (F_{NS,AS} - d_A \odot  F_{NS,AS} )) \stackrel{NS}{\star} c_{NS}$	
7	$V_92$	$E_140$	$\hat{V}_A := \text{Instantiate}(\hat{V}_A, \#)$	
6	$V_92$	$E_67$	$\hat{V}_A := (\rho_N)^{-1} \cdot k_{xN}^c \cdot A_{yzN} \cdot D_{N,A} \stackrel{N}{\star} p_N$	
5	$V_56$	$E_35$	$h_{NS} := H_N \odot (n_{NS})^{-1}$	
4	$V_99$	$E_74$	$\hat{n}^c{}_{AS} := \hat{V}_A \odot c_{AS}$	
3	$V_75$	$E_52$	$\mid_{hNS} := h_{NS}$	
2	$V_102$	$E_77$	$\hat{H}^c{}_A := \left(F_{NS,AS} \overset{NS}{\star} {}_{hNS}\right) \overset{S \in AS}{\star} \hat{n}^c{}_{AS}$	
1	$V_104$	E <sub>7</sub> 9	$\hat{w}_A := \operatorname{Instantiate}(\hat{H}^c{}_A, \#)$	
0	$V_105$	$E_80$	$\hat{w}_N := F_{N,A} \stackrel{A}{\star} \hat{w}_A$	