

## Equation assignment sequence for variable $\hat{n}^d$

no	var	equ	quations	token
59	14	-	$S_N :: \text{port variable}$	
58	147	-	$P_{NK} :: \text{port variable}$	
57	40	-	$\lambda_S :: \text{port variable}$	
56	24	-	$A^v :: \text{port variable}$	
55	155	-	$B :: \text{port variable}$	
54	8	-	$F_{N,A} :: \text{port variable}$	
53	38	-	$K^o_K :: \text{port variable}$	
52	33	-	$P_{K,NK} :: \text{port variable}$	
51	158	-	$N_{K,KS} :: \text{port variable}$	
50	90	-	$D_{N,A} :: \text{port variable}$	
49	36	-	$P_{NS,KS} :: \text{port variable}$	
48	35	-	$P_{N,NK} :: \text{port variable}$	
47	70	-	$F_{NS,AS} :: \text{port variable}$	
46	10	-	$r_{xN} :: \text{port variable}$	
45	1	-	$\# :: \text{port variable}$	
44	15	-	$V_N :: \text{port variable}$	
43	5	-	$t :: \text{port variable}$	
42	12	-	$r_{zN} :: \text{port variable}$	

*Continued on next page*

no	var	equ	quations	token
41	11	-	$r_{yN} :: \text{port variable}$	
40	13	-	$U_N :: \text{port variable}$	
39	91	-	$D_{NS,AS} :: \text{port variable}$	
38	41	20	$\lambda_S := \lambda_S$	
37	57	36	$m_N := \lambda_S \overset{S \in NS}{\star} n_{NS}$	
36	67	45	$c_{NS} := c_{NS}$	
35	58	37	$m_N := m_N$	
34	18	7	$T_N := \frac{\partial U_N}{\partial S_N}$	
33	152	124	$c^o_{NK,KS} := \text{Instantiate}(c_{NK,KS}, \#)$	
32	151	123	$c_{NK,KS} := P_{NK} \cdot \left( P_{NS,KS} \overset{NS}{\star} c_{NS} \right)$	
31	48	27	$k^c_{xN} := \left( \lambda_S \overset{S \in NS}{\star} (\mu_{NS})^{-1} \right) \cdot (V_N)^{-1} \cdot \frac{\partial U_N}{\partial p_N} \cdot v_{xN}$	
30	59	38	$\rho_N := m_N \cdot (V_N)^{-1}$	
29	62	41	$E^a_{NK} := \text{Instantiate}(R \cdot T_{NK}, \#)$	
28	60	39	$T_{NK} := P_{N,NK} \overset{N}{\star} T_N$	
27	157	127	$R := A^v \cdot B$	
26	153	125	$x_{NK,KS} := (c^o_{NK,KS})^{-1} \cdot c_{NK,KS}$	
25	97	72	$d_A := \text{sign} \left( F_{N,A} \overset{N}{\star} p_N \right)$	
24	66	44	$c_{NS} := (V_N)^{-1} \odot n_{NS}$	
23	4	3	$0.5 := \text{Instantiate}(\#, \#)$	
22	81	58	$k^c_{xN} := k^c_{xN}$	

Continued on next page

no	var	equ	quations	token
21	74	51	$\rho_N := \rho_N$	
20	17	6	$p_N := \left(-\frac{\partial U_N}{\partial V_N}\right)$	
19	63	42	$K_{NK} := K^o_K \odot \exp((-E^a_{NK}) \cdot (R \cdot T_{NK})^{-1})$	
18	160	129	$\phi_{NK} := \prod_{KS} x_{NK,KS}^{N_{NK,KS}}$	
17	159	128	$N_{NK,KS} := P_{K,NK} \overset{K}{\star} N_{K,KS}$	
16	98	73	$c_{AS} := (0.5 \cdot (F_{NS,AS} - d_A \odot  F_{NS,AS} )) \overset{NS}{\star} c_{NS}$	
15	92	67	$\hat{V}_A := (\rho_N)^{-1} \cdot k_{xN}^c \cdot A_{yzN} \cdot D_{N,A} \overset{N}{\star} p_N$	
14	163	130	$\tilde{n}_{NS} := V_N \overset{N}{\star} \left( P_{N,NK} \overset{NK}{\star} \left( (K_{NK} \cdot \phi_{NK}) \cdot \left( P_{NS,KS} \overset{KS}{\star} N_{NK,KS} \right) \right) \right)$	
13	99	74	$\hat{n}_{AS}^c := \hat{V}_A \odot c_{AS}$	
12	94	69	$\hat{n}_{NS}^d := F_{NS,AS} \overset{AS}{\star} \hat{n}_{AS}^d$	
11	164	131	$\tilde{n}_{NS} := \tilde{n}_{NS}$	
10	100	75	$\hat{n}_{NS}^c := F_{NS,AS} \overset{AS}{\star} \hat{n}_{AS}^c$	
9	28	15	$v_{xN} := \frac{\partial r_{xN}}{\partial t}$	
8	7	5	$t^e := \text{Instantiate}(t, \#)$	
7	6	4	$t^o := \text{Instantiate}(t, \#)$	
6	101	76	$\dot{n}_{NS} := \hat{n}_{NS}^c + \hat{n}_{NS}^d + \tilde{n}_{NS}$	
5	52	31	$k_{xNS}^d := (\mu_{NS})^{-1} \cdot \left( v_{xN} \odot \left( (V_N)^{-1} \odot \frac{\partial U_N}{\partial \mu_{NS}} \right) \right)$	
4	16	86	$n_{NS} := \int_{t^o}^{t^e} \dot{n}_{NS} dt$	
3	86	63	$k_{xNS}^d := k_{xNS}^d$	
2	71	48	$A_{yzN} := r_{yN} \cdot r_{zN}$	

Continued on next page

no	var	equ	quations	token
1	19	8	$\mu_{NS} := \frac{\partial U_N}{\partial n_{NS}}$	
0	93	68	$\hat{n}_{AS}^d := A_{yzN} \odot \left( -k_{xNS}^d \right) \cdot D_{NS,AS} \overset{NS}{\star} \mu_{NS}$	