

## Equation assignment sequence for variable $u$

no	var	equ	quations	token
71	95	-	$P_{NS,KS} :: \text{port variable}$	
70	40	-	$\lambda_S :: \text{port variable}$	
69	15	-	$r_{xN} :: \text{port variable}$	
68	101	-	$A^v_N :: \text{port variable}$	
67	105	-	$K^o_K :: \text{port variable}$	
66	17	-	$r_{zN} :: \text{port variable}$	
65	16	-	$r_{yN} :: \text{port variable}$	
64	13	-	$P_{N,NK} :: \text{port variable}$	
63	98	-	$N_{S,K} :: \text{port variable}$	
62	9	-	$P_{NS,AS} :: \text{port variable}$	
61	1	-	$F_{N,A} :: \text{port variable}$	
60	12	-	$P_{S,NS} :: \text{port variable}$	
59	11	-	$P_{K,NK} :: \text{port variable}$	
58	14	-	$P_{NK,KS} :: \text{port variable}$	
57	3	-	$\# :: \text{port variable}$	
56	2	-	$t :: \text{port variable}$	
55	21	-	$V_N :: \text{port variable}$	
54	20	-	$S_N :: \text{port variable}$	
53	19	-	$U_N :: \text{port variable}$	

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no	var	equ	quations	token
52	151	-	$F_{A,NS} :: \text{port variable}$	
51	145	-	$c^n_{NS} :: \text{port variable}$	
50	144	-	$p^n_N :: \text{port variable}$	
49	146	-	$F_{N,A} :: \text{port variable}$	
48	143	-	$T^n_N :: \text{port variable}$	
47	61	44	$\lambda_S := \lambda_S$	
46	96	78	$c_{KS} := c_{NS} \star^{NS} P_{NS,KS}$	
45	27	11	$B_N := \text{Set}(S_N, \#)$	
44	81	64	$m_N := \lambda_S \star^{S \in NS} n_{NS}$	
43	49	32	$k^c_{xN} := \left( \lambda_S \star^{S \in NS} (\mu_{NS})^{-1} \right) \cdot (V_N)^{-1} \cdot \frac{\partial U_N}{\partial p_N} \cdot v_{xN}$	
42	36	20	$v_{xN} := \frac{\partial r_{xN}}{\partial t}$	
41	97	79	$c_{KS} := c_{KS}$	
40	108	87	$c^o_{KS} := \text{Set}(c_{KS}, \#)$	
39	94	77	$T_{NK} := T_{NK}$	
38	104	84	$E_{a_{NK}} := \text{Set}(P_{N,NK} \star^N R_N \cdot T_{NK}, \#)$	
37	103	83	$P_{N,NK} := P_{N,NK}$	
36	102	82	$R_N := A^v_N \cdot B_N$	
35	78	61	$d_A := \text{sign} \left( F_{N,A} \star^N p_N \right)$	
34	6	3	$1/2 := \text{Set}(\#, \#)$	
33	82	65	$\rho_N := (V_N)^{-1} \cdot m_N$	

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no	var	equ	quations	token
32	66	49	$k_{xN}^c := k_{xN}^c$	
31	53	36	$k_{xNS}^d := (\mu_{NS})^{-1} \cdot \left( v_{xN} \odot \left( (V_N)^{-1} \odot \frac{\partial U_N}{\partial \mu_{NS}} \right) \right)$	
30	109	88	$\phi_{KS} := \prod (c_{KS} \cdot (c_{KS}^o)^{-1})$	
29	106	85	$K_{NK} := K_K^o \odot \exp((-E_{a_{NK}}) \cdot \left( R_N \overset{N}{\star} P_{N,NK} \cdot T_{NK} \right)^{-1})$	
28	84	67	$c_{AS} := (1/2 \cdot (F_{NS,AS} - d_A \odot  F_{NS,AS} )) \overset{NS}{\star} c_{NS}$	
27	83	66	$\hat{V}_A := (\rho_N)^{-1} \cdot k_{xN}^c \cdot A_{y,z_N} \cdot F_{N,A} \overset{N}{\star} p_N$	
26	80	63	$A_{y,z_N} := r_{y_N} \cdot r_{z_N}$	
25	70	53	$k_{xNS}^d := k_{xNS}^d$	
24	24	9	$\mu_{NS} := \frac{\partial U_N}{\partial n_{NS}}$	
23	91	74	$T_{NK} := P_{N,NK} \overset{N}{\star} T_N$	
22	111	90	$N_{S,K} := N_{S,K}$	
21	110	89	$\phi_{KS} := \phi_{KS}$	
20	107	86	$K_{NK} := K_{NK}$	
19	85	68	$\hat{n}_{AS}^c := \hat{V}_A \odot c_{AS}$	
18	128	107	$\hat{n}_{AS}^d := A_{y,z_N} \odot (-k_{xNS}^d) \cdot F_{NS,AS} \overset{NS}{\star} \mu_{NS}$	
17	10	6	$F_{NS,AS} := F_{N,A} \odot P_{NS,AS}$	
16	113	92	$N_{NS,NK} := P_{S,NS} \overset{S}{\star} \left( (P_{K,NK} \cdot T_{NK} \cdot (T_{NK})^{-1}) \overset{K}{\star} N_{S,K} \right)$	
15	112	91	$\xi_{NK} := K_{NK} \cdot P_{NK,KS} \overset{KS}{\star} \phi_{KS}$	
14	86	69	$\hat{n}_{NS}^c := F_{NS,AS} \overset{AS}{\star} \hat{n}_{AS}^c$	
13	129	108	$\hat{n}_{NS}^d := F_{NS,AS} \overset{AS}{\star} \hat{n}_{AS}^d$	

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no	var	equ	quations	token
12	114	93	$\tilde{n}_{NS} := V_N \odot \left( N_{NS,NK} \overset{NK}{\star} \xi_{NK} \right)$	
11	59	42	$t^e := Set(t, t)$	
10	58	41	$t^o := Set(t, t)$	
9	137	118	$n^o_{NS} := Set(n_{NS}, \#)$	
8	132	111	$\dot{n}_{NS} := \hat{n}_{NS}^c + \hat{n}_{NS}^d + \tilde{n}_{NS}$	
7	18	119	$n_{NS} := \int_{t^o}^{t^e} \dot{n}_{NS} \, dt + n^o_{NS}$	
6	79	62	$c_{NS} := (V_N)^{-1} \odot n_{NS}$	
5	22	7	$p_N := \frac{\partial U_N}{\partial V_N}$	
4	23	8	$T_N := \frac{\partial U_N}{\partial S_N}$	
3	152	127	$s_{cA} := F_{A,NS} \overset{NS}{\star} (c_{NS} \cdot (c^n_{NS})^{-1})$	
2	149	126	$s_{pA} := F_{N,A} \overset{N}{\star} (p_N \cdot (p^n_N)^{-1})$	
1	148	125	$s_{TA} := F_{N,A} \overset{N}{\star} (T_N \cdot (T^n_N)^{-1})$	
0	153	128	$u_A := Stack(s_{TA}, s_{pA}, s_{cA})$	