# Equation assignment sequence for variable $n$

| no | var | equ | quations | token |
|---|---|---|---|---|
| 47 | 12 | - | $S_N$ :: port variable | |
| 46 | 29 | - | $\lambda_S$ :: port variable | |
| 45 | 26 | - | $A^v$ :: port variable | |
| 44 | 64 | - | $P_{NS,KS}$ :: port variable | |
| 43 | 88 | - | ${K^o}_K$ :: port variable | |
| 42 | 62 | - | $P_{N,NK}$ :: port variable | |
| 41 | 127 | - | $D_{N,A}$ :: port variable | |
| 40 | 23 | - | $r_{zN}$ :: port variable | |
| 39 | 10 | - | $r_{yN}$ :: port variable | |
| 38 | 86 | - | $N_{S,K}$ :: port variable | |
| 37 | 61 | - | $P_{S,NS}$ :: port variable | |
| 36 | 60 | - | $P_{K,NK}$ :: port variable | |
| 35 | 63 | - | $P_{NK,KS}$ :: port variable | |
| 34 | 59 | - | $P_{NS,AS}$ :: port variable | |
| 33 | 5 | - | $F_{N,A}$ :: port variable | |
| 32 | 128 | - | $D_{NS,AS}$ :: port variable | |
| 31 | 13 | - | $V_N$ :: port variable | |
| 30 | 1 | - | $\#$ :: port variable | |
| 29 | 6 | - | $t$ :: port variable | |

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| no | var | equ | quations | token |
|---|---|---|---|---|
| 28 | 27 | 16 | $Bo_N := \text{Instantiate}(S_N, \#)$ | |
| 27 | 69 | 47 | $m_N := \lambda_S \overset{S \in NS}{\star} n_{NS}$ | |
| 26 | 87 | 64 | $E_{aNK} := \text{Instantiate}(P_{N,NK} \overset{N}{\star} R_N \,.\, T_{NK}, \#)$ | |
| 25 | 28 | 17 | $R_N := A^v \,.\, Bo_N$ | |
| 24 | 115 | 91 | $c^o{}_{KS} := \text{Instantiate}(c_{KS}, \#)$ | |
| 23 | 114 | 90 | $c_{KS} := c_{NS} \overset{NS}{\star} P_{NS,KS}$ | |
| 22 | 71 | 49 | $\rho_N := m_N \,.\, (V_N)^{-1}$ | |
| 21 | 65 | 46 | $d_A := \text{sign}\left(F_{N,A} \overset{N}{\star} p_N\right)$ | |
| 20 | 4 | 3 | $0.5 := \text{Instantiate}(\#, \#)$ | |
| 19 | 108 | 84 | $c_{NS} := (V_N)^{-1} \odot n_{NS}$ | |
| 18 | 77 | 55 | $T_{NK} := P_{N,NK} \overset{N}{\star} T_N$ | |
| 17 | 89 | 65 | $K_{NK} := K^o{}_K \odot exp((-E_{aNK}) \,.\, \left(R_N \overset{N}{\star} P_{N,NK} \,.\, T_{NK}\right)^{-1})$ | |
| 16 | 116 | 92 | $\phi_{KS} := \prod \left(c_{KS} \,.\, (c^o{}_{KS})^{-1}\right)$ | |
| 15 | 98 | 74 | $\hat{V}_A := (\rho_N)^{-1} \,.\, k^c_{xN} \,.\, A_{yzN} \,.\, D_{N,A} \overset{N}{\star} p_N$ | |
| 14 | 109 | 85 | $c_{AS} := (0.5 \,.\, (F_{NS,AS} - d_A \odot \lvert F_{NS,AS} \rvert)) \overset{NS}{\star} c_{NS}$ | |
| 13 | 95 | 71 | $A_{yzN} := r_{yN} \,.\, r_{zN}$ | |
| 12 | 93 | 69 | $N_{NS,NK} := P_{S,NS} \overset{S}{\star} \left(\left(P_{K,NK} \,.\, T_{NK} \,.\, (T_{NK})^{-1}\right) \overset{K}{\star} N_{S,K}\right)$ | |
| 11 | 117 | 93 | $\xi_{NK} := K_{NK} \,.\, P_{NK,KS} \overset{KS}{\star} \phi_{KS}$ | |
| 10 | 110 | 86 | $\hat{n}^c{}_{AS} := \hat{V}_A \odot c_{AS}$ | |
| 9 | 73 | 51 | $F_{NS,AS} := F_{N,A} \odot P_{NS,AS}$ | |

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| no | var | equ | quations | token |
|---|---|---|---|---|
| 8 | 104 | 80 | $\hat{n}^d{}_{AS} := A_{yzN} \odot \left(-k^d_{xNS}\right) . D_{NS,AS} \overset{NS}{\star} \mu_{NS}$ | |
| 7 | 118 | 94 | $\tilde{n}_{NS} := V_N \odot \left(N_{NS,NK} \overset{NK}{\star} \xi_{NK}\right)$ | |
| 6 | 111 | 87 | $\hat{n}^c{}_{NS} := F_{NS,AS} \overset{AS}{\star} \hat{n}^c{}_{AS}$ | |
| 5 | 105 | 81 | $\hat{n}^d{}_{NS} := F_{NS,AS} \overset{AS}{\star} \hat{n}^d{}_{AS}$ | |
| 4 | 8 | 5 | $t_e := \text{Instantiate}(t, \#)$ | |
| 3 | 7 | 4 | $t_o := \text{Instantiate}(t, \#)$ | |
| 2 | 150 | 124 | $n^o{}_{NS} := \text{Instantiate}(n_{NS}, \#)$ | |
| 1 | 119 | 95 | $\dot{n}_{NS} := \hat{n}^c{}_{NS} + \hat{n}^d{}_{NS} + \tilde{n}_{NS}$ | |
| 0 | 42 | 116 | $n_{NS} := \int_{t_o}^{t_e} \dot{n}_{NS} \; dt + n^o{}_{NS}$ | |