

## Equation assignment sequence for variable $\hat{H}^d_A$

no	var	equ	quations	token
87	V <sub>147</sub>	-	$P_{NK} :: \text{port variable}$	
86	V <sub>155</sub>	-	$B :: \text{port variable}$	
85	V <sub>40</sub>	-	$\lambda_S :: \text{port variable}$	
84	V <sub>38</sub>	-	$K^o_K :: \text{port variable}$	
83	V <sub>33</sub>	-	$P_{K,NK} :: \text{port variable}$	
82	V <sub>158</sub>	-	$N_{K,KS} :: \text{port variable}$	
81	V <sub>36</sub>	-	$P_{NS,KS} :: \text{port variable}$	
80	V <sub>35</sub>	-	$P_{N,NK} :: \text{port variable}$	
79	V <sub>90</sub>	-	$D_{N,A} :: \text{port variable}$	
78	V <sub>8</sub>	-	$F_{N,A} :: \text{port variable}$	
77	V <sub>10</sub>	-	$r_{xN} :: \text{port variable}$	
76	V <sub>127</sub>	-	$1_S :: \text{port variable}$	
75	V <sub>1</sub>	-	$\# :: \text{port variable}$	
74	V <sub>14</sub>	-	$S_N :: \text{port variable}$	
73	V <sub>24</sub>	-	$A^v :: \text{port variable}$	
72	V <sub>15</sub>	-	$V_N :: \text{port variable}$	
71	V <sub>5</sub>	-	$t :: \text{port variable}$	
70	V <sub>12</sub>	-	$r_{zN} :: \text{port variable}$	

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no	var	equ	quations	token
69	V <sub>11</sub>	-	$r_{yN} :: \text{port variable}$	
68	V <sub>13</sub>	-	$U_N :: \text{port variable}$	
67	V <sub>91</sub>	-	$D_{NS,AS} :: \text{port variable}$	
66	V <sub>70</sub>	-	$F_{NS,AS} :: \text{port variable}$	
65	V <sub>41</sub>	E <sub>20</sub>	$\lambda_S := \lambda_S$	
64	V <sub>67</sub>	E <sub>45</sub>	$c_{NS} := c_{NS}$	
63	V <sub>57</sub>	E <sub>36</sub>	$m_N := \lambda_S \overset{S \in NS}{\star} n_{NS}$	
62	V <sub>152</sub>	E <sub>124</sub>	$c^o_{NK,KS} := \text{Instantiate}(c_{NK,KS}, \#)$	
61	V <sub>151</sub>	E <sub>123</sub>	$c_{NK,KS} := P_{NK} \cdot \left( P_{NS,KS} \overset{NS}{\star} c_{NS} \right)$	
60	V <sub>58</sub>	E <sub>37</sub>	$m_N := m_N$	
59	V <sub>44</sub>	E <sub>23</sub>	$k^q_{xN} := (V_N)^{-1} \cdot \frac{\partial U_N}{\partial T_N} \cdot v_{xN}$	
58	V <sub>62</sub>	E <sub>41</sub>	$E^a_{NK} := \text{Instantiate}(R \cdot T_{NK}, \#)$	
57	V <sub>60</sub>	E <sub>39</sub>	$T_{NK} := P_{N,NK} \overset{N}{\star} T_N$	
56	V <sub>157</sub>	E <sub>127</sub>	$R := A^v \cdot B$	
55	V <sub>153</sub>	E <sub>125</sub>	$x_{NK,KS} := (c^o_{NK,KS})^{-1} \cdot c_{NK,KS}$	
54	V <sub>48</sub>	E <sub>27</sub>	$k^c_{xN} := \left( \lambda_S \overset{S \in NS}{\star} (\mu_{NS})^{-1} \right) \cdot (V_N)^{-1} \cdot \frac{\partial U_N}{\partial p_N} \cdot v_{xN}$	
53	V <sub>59</sub>	E <sub>38</sub>	$\rho_N := m_N \cdot (V_N)^{-1}$	
52	V <sub>2</sub>	E <sub>1</sub>	$1 := \text{Instantiate}(\#, \#)$	
51	V <sub>76</sub>	E <sub>53</sub>	$k^q_{xN} := k^q_{xN}$	
50	V <sub>63</sub>	E <sub>42</sub>	$K_{NK} := K^o_K \odot \exp((-E^a_{NK}) \cdot (R \cdot T_{NK})^{-1})$	

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no	var	equ	quations	token
49	V <sub>160</sub>	E <sub>129</sub>	$\phi_{NK} := \prod_{KS} x_{NK,KS}^{N_{NK,KS}}$	
48	V <sub>159</sub>	E <sub>128</sub>	$N_{NK,KS} := P_{K,NK} \overset{K}{\star} N_{K,KS}$	
47	V <sub>97</sub>	E <sub>72</sub>	$d_A := \text{sign} \left( F_{N,A} \overset{N}{\star} p_N \right)$	
46	V <sub>66</sub>	E <sub>44</sub>	$c_{NS} := (V_N)^{-1} \odot n_{NS}$	
45	V <sub>4</sub>	E <sub>3</sub>	$0.5 := \text{Instantiate}(\#, \#)$	
44	V <sub>81</sub>	E <sub>58</sub>	$k_{xN}^c := k_{xN}^c$	
43	V <sub>74</sub>	E <sub>51</sub>	$\rho_N := \rho_N$	
42	V <sub>171</sub>	E <sub>138</sub>	$s := 0.5 \cdot (1 + \text{sign}(t^o))$	
41	V <sub>106</sub>	E <sub>81</sub>	$\hat{q}_{xA} := A_{yzN} \cdot k_{xN}^q \cdot D_{N,A} \overset{N}{\star} T_N$	
40	V <sub>104</sub>	E <sub>79</sub>	$\hat{w}_A := \text{Instantiate}(\hat{H}_A^c, \#)$	
39	V <sub>102</sub>	E <sub>77</sub>	$\hat{H}_A^c := \left( F_{NS,AS} \overset{NS}{\star} h_{NS} \right) \overset{S \in AS}{\star} \hat{n}_{AS}^c$	
38	V <sub>163</sub>	E <sub>130</sub>	$\tilde{n}_{NS} := V_N \overset{N}{\star} \left( P_{N,NK} \overset{NK}{\star} \left( (K_{NK} \cdot \phi_{NK}) \cdot \left( P_{NS,KS} \overset{KS}{\star} N_{NK,KS} \right) \right) \right)$	
37	V <sub>98</sub>	E <sub>73</sub>	$c_{AS} := (0.5 \cdot (F_{NS,AS} - d_A \odot  F_{NS,AS} )) \overset{NS}{\star} c_{NS}$	
36	V <sub>92</sub>	E <sub>140</sub>	$\hat{V}_A := \text{Instantiate}(\hat{V}_A, \#)$	
35	V <sub>92</sub>	E <sub>67</sub>	$\hat{V}_A := (\rho_N)^{-1} \cdot k_{xN}^c \cdot A_{yzN} \cdot D_{N,A} \overset{N}{\star} p_N$	
34	V <sub>172</sub>	E <sub>139</sub>	$s := s$	
33	V <sub>96</sub>	E <sub>71</sub>	$\hat{H}_N^d := F_{N,A} \overset{A}{\star} \hat{H}_A^d$	
32	V <sub>107</sub>	E <sub>82</sub>	$\hat{q}_N := F_{N,A} \overset{A}{\star} \hat{q}_{xA}$	
31	V <sub>105</sub>	E <sub>80</sub>	$\hat{w}_N := F_{N,A} \overset{A}{\star} \hat{w}_A$	
30	V <sub>103</sub>	E <sub>78</sub>	$\hat{H}_N^c := F_{N,A} \overset{A}{\star} \hat{H}_A^c$	

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no	var	equ	quations	token
29	V <sub>94</sub>	E <sub>69</sub>	$\hat{n}_{NS}^d := F_{NS,AS} \overset{AS}{\star} \hat{n}_{AS}^d$	
28	V <sub>164</sub>	E <sub>131</sub>	$\tilde{n}_{NS} := \tilde{n}_{NS}$	
27	V <sub>100</sub>	E <sub>75</sub>	$\hat{n}_{NS}^c := F_{NS,AS} \overset{AS}{\star} \hat{n}_{AS}^c$	
26	V <sub>99</sub>	E <sub>74</sub>	$\hat{n}_{AS}^c := \hat{V}_A \odot c_{AS}$	
25	V <sub>173</sub>	E <sub>141</sub>	$\hat{n}_{AS}^{c,controlled} := s . \hat{n}_{AS}^c$	
24	V <sub>28</sub>	E <sub>15</sub>	$v_{xN} := \frac{\partial r_{xN}}{\partial t}$	
23	V <sub>168</sub>	E <sub>134</sub>	$n_{tN} := 1_S \overset{S \in NS}{\star} n_{NS}$	
22	V <sub>165</sub>	E <sub>132</sub>	$boz_N := \text{Instantiate}(S_N, \#)$	
21	V <sub>108</sub>	E <sub>83</sub>	$\dot{H}_N := \hat{H}_N^c + \hat{H}_N^d + \hat{q}_N + \hat{w}_N$	
20	V <sub>17</sub>	E <sub>6</sub>	$p_N := \left( -\frac{\partial U_N}{\partial V_N} \right)$	
19	V <sub>7</sub>	E <sub>5</sub>	$t^e := \text{Instantiate}(t, \#)$	
18	V <sub>6</sub>	E <sub>4</sub>	$t^o := \text{Instantiate}(t, \#)$	
17	V <sub>110</sub>	E <sub>85</sub>	$n_{NS}^o := \text{Instantiate}(n_{NS}, \#)$	
16	V <sub>101</sub>	E <sub>76</sub>	$\dot{n}_{NS} := \hat{n}_{NS}^c + \hat{n}_{NS}^d + \tilde{n}_{NS}$	
15	V <sub>101</sub>	E <sub>142</sub>	$\dot{n}_{NS} := F_{NS,AS} \overset{AS}{\star} \text{Stack}(\hat{n}_{AS}^c, \hat{n}_{AS}^{c,controlled})$	
14	V <sub>52</sub>	E <sub>31</sub>	$k_{xNS}^d := (\mu_{NS})^{-1} . \left( v_{xN} \odot \left( (V_N)^{-1} \odot \frac{\partial U_N}{\partial \mu_{NS}} \right) \right)$	
13	V <sub>18</sub>	E <sub>7</sub>	$T_N := \frac{\partial U_N}{\partial S_N}$	
12	V <sub>169</sub>	E <sub>135</sub>	$\xi_{NS} := (n_{tN})^{-1} \odot n_{NS}$	
11	V <sub>166</sub>	E <sub>133</sub>	$R_N := A^v . boz_N$	
10	V <sub>20</sub>	E <sub>87</sub>	$H_N := \int_{t^o}^{t^e} \dot{H}_N dt$	

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no	var	equ	quations	token
9	V <sub>20</sub>	E <sub>9</sub>	$H_N := U_N - p_N \cdot V_N$	
8	V <sub>16</sub>	E <sub>86</sub>	$n_{NS} := \int_{t^o}^{t^e} \dot{n}_{NS} \, dt + n_{NS}^o$	
7	V <sub>86</sub>	E <sub>63</sub>	$k_{xNS}^d := k_{xNS}^d$	
6	V <sub>71</sub>	E <sub>48</sub>	$A_{yzN} := r_{yN} \cdot r_{zN}$	
5	V <sub>19</sub>	E <sub>136</sub>	$\mu_{NS} := (R_N \cdot T_N) \odot \ln(\xi_{NS})$	
4	V <sub>19</sub>	E <sub>8</sub>	$\mu_{NS} := \frac{\partial U_N}{\partial n_{NS}}$	
3	V <sub>56</sub>	E <sub>35</sub>	$h_{NS} := H_N \odot (n_{NS})^{-1}$	
2	V <sub>93</sub>	E <sub>68</sub>	$\hat{n}_{AS}^d := A_{yzN} \odot (-k_{xNS}^d) \cdot D_{NS,AS} \overset{NS}{\star} \mu_{NS}$	
1	V <sub>75</sub>	E <sub>52</sub>	$h_{NS} := h_{NS}$	
0	V <sub>95</sub>	E <sub>70</sub>	$\hat{H}_A^d := \left( F_{NS,AS} \overset{NS}{\star} h_{NS} \right) \overset{S \in AS}{\star} \hat{n}_{AS}^d$	