

t28_yellow20

(TMYp6nKexom2YHnQv6X4QXxY5EaX4TJKc4R)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_altcat_1 : \iota \Rightarrow o$ be given. Let $v11_altcat_1 : \iota \Rightarrow o$ be given. Let $v12_altcat_1 : \iota \Rightarrow o$ be given. Let $l2_altcat_1 : \iota \Rightarrow o$ be given. Let $v3_altcat_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_altcat_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l2_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k14_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_altcat_2 : \iota \Rightarrow o$ be given. Let $v6_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v8_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k13_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_functor0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_yellow20 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v9_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v15_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v12_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l2_altcat_1 X0)) \Rightarrow (\forall X1. \\
& ((\neg v2_struct_0 X1) \wedge ((v1_altcat_2 X1) \wedge (l2_altcat_1 X1))) \Rightarrow (\forall X2. \\
& ((\neg v2_struct_0 X2) \wedge ((v1_altcat_2 X2) \wedge (l2_altcat_1 X2))) \Rightarrow (\forall X3. \\
& ((v6_functor0 X3 X0 X1) \wedge ((v8_functor0 X3 X0 X1) \wedge (l2_functor0 X3 \\
& X0 X1))) \Rightarrow (\forall X4.(l2_functor0 X4 X1 X2) \Rightarrow (\forall X5.(m1_subset_1 \\
& X5 (u1_struct_0 X0)) \Rightarrow (k3_functor0 X0 X2 (k13_functor0 X0 X1 X2 X3 \\
& X4) X5 = k3_functor0 X1 X2 X4 (k3_functor0 X0 X1 X3 X5))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l2_altcat_1 X0)) \Rightarrow (\forall X1. \\
& ((\neg v2_struct_0 X1) \wedge (m1_altcat_2 X1 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\
& X2 (u1_struct_0 X1)) \Rightarrow (k3_functor0 X1 X0 (k10_functor0 X0 X1) X2 = \\
& X2)))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.(((\neg v2_struct_0 X0) \wedge ((v2_altcat_1 X0) \wedge \\
& ((v11_altcat_1 X0) \wedge ((v12_altcat_1 X0) \wedge (l2_altcat_1 X0)))))) \wedge \\
& ((\neg v2_struct_0 X1) \wedge ((v2_altcat_1 X1) \wedge ((v3_altcat_2 X1 X0) \wedge (\\
& m1_altcat_2 X1 X0)))) \Rightarrow (k3_yellow20 X0 X1 = k10_functor0 X0 X1)
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge((v2_altcat_1 X0)\wedge \\ ((v12_altcat_1 X0)\wedge(l2_altcat_1 X0))))\wedge((\neg v2_struct_0 X1)\wedge \\ ((v12_altcat_1 X1)\wedge(l2_altcat_1 X1))))\Rightarrow(\forall X2.(m2_functor0 \\ X2 X0 X1)\Rightarrow(l2_functor0 X2 X0 X1)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.(l2_altcat_1 X0)\Rightarrow(\forall X1.(m1_altcat_2 X1 X0)\Rightarrow \\ (l2_altcat_1 X1)) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge((v2_altcat_1 X0)\wedge \\ ((v11_altcat_1 X0)\wedge((v12_altcat_1 X0)\wedge(l2_altcat_1 X0))))\wedge \\ ((\neg v2_struct_0 X1)\wedge((v2_altcat_1 X1)\wedge((v3_altcat_2 X1 X0)\wedge(\\ m1_altcat_2 X1 X0))))))\Rightarrow((v9_functor0 (k3_yellow20 X0 X1) X1 X0)\wedge \\ ((v15_functor0 (k3_yellow20 X0 X1) X1 X0)\wedge(m2_functor0 (k3_yellow20 \\ X0 X1) X1 X0))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0)\wedge((v1_altcat_2 X0)\wedge(l2_altcat_1 \\ X0)))\Rightarrow(\forall X1.((\neg v2_struct_0 X1)\wedge((v1_altcat_2 X1)\wedge(l2_altcat_1 \\ X1)))\Rightarrow(\forall X2.((\neg v2_struct_0 X2)\wedge(m1_altcat_2 X2 X0))\Rightarrow(\\ \forall X3.(l2_functor0 X3 X0 X1)\Rightarrow(k14_functor0 X0 X1 X2 X3 = k13_functor0 \\ X2 X0 X1 (k10_functor0 X0 X2) X3)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge((v2_altcat_1 X0)\wedge \\ ((v12_altcat_1 X0)\wedge(l2_altcat_1 X0))))\wedge((\neg v2_struct_0 X1)\wedge \\ ((v12_altcat_1 X1)\wedge(l2_altcat_1 X1))))\Rightarrow(\forall X2.(m2_functor0 \\ X2 X0 X1)\Rightarrow((v15_functor0 X2 X0 X1)\Rightarrow(v6_functor0 X2 X0 X1))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0)\wedge((v2_altcat_1 X0)\wedge((v12_altcat_1 \\ X0)\wedge(l2_altcat_1 X0))))\Rightarrow(\forall X1.(m1_altcat_2 X1 X0)\Rightarrow(((\\ \neg v2_struct_0 X1)\wedge((v2_altcat_1 X1)\wedge(v3_altcat_2 X1 X0)))\Rightarrow(((\\ \neg v2_struct_0 X1)\wedge(v12_altcat_1 X1)))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.(l2_altcat_1 X0)\Rightarrow(((\neg v2_struct_0 X0)\wedge(v12_altcat_1 \\ X0))\Rightarrow((\neg v2_struct_0 X0)\wedge(v1_altcat_2 X0))) \quad (10)$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v2_altcat_1 X0) \wedge \\
& ((v12_altcat_1 X0) \wedge (l2_altcat_1 X0)))) \wedge ((\neg v2_struct_0 X1) \wedge \\
& ((v12_altcat_1 X1) \wedge (l2_altcat_1 X1)))) \Rightarrow (\forall X2. (m2_functor0 \\
& X2 X0 X1) \Rightarrow ((v8_functor0 X2 X0 X1) \wedge (v12_functor0 X2 X0 X1)))
\end{aligned} \tag{11}$$

Theorem 1

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_altcat_1 X0) \wedge ((v11_altcat_1 \\
& X0) \wedge ((v12_altcat_1 X0) \wedge (l2_altcat_1 X0)))))) \Rightarrow (\forall X1. ((\\
& \neg v2_struct_0 X1) \wedge ((v2_altcat_1 X1) \wedge ((v11_altcat_1 X1) \wedge ((v12_altcat_1 \\
& X1) \wedge (l2_altcat_1 X1)))))) \Rightarrow (\forall X2. ((\neg v2_struct_0 X2) \wedge ((\\
& v2_altcat_1 X2) \wedge ((v3_altcat_2 X2 X0) \wedge (m1_altcat_2 X2 X0)))) \Rightarrow \\
& (\forall X3. (l2_functor0 X3 X0 X1) \Rightarrow (\forall X4. (m1_subset_1 X4 \\
& (u1_struct_0 X0)) \Rightarrow (\forall X5. (m1_subset_1 X5 (u1_struct_0 X2)) \Rightarrow \\
& ((X5 = X4) \Rightarrow (k3_functor0 X2 X1 (k14_functor0 X0 X1 X2 X3) X5 = k3_functor0 \\
& X0 X1 X3 X4))))))
\end{aligned}$$