

t41_afproj (TMHxAes- Boy4AD7S5FPi14QeGMXGJCXu56pN)

October 27, 2020

Let $v7_struct_0 : \iota \Rightarrow o$ be given. Let $v1_diraf : \iota \Rightarrow o$ be given. Let $l1_analoaf : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_incsp_1 : \iota \Rightarrow \iota$ be given. Let $k14_afproj : \iota \Rightarrow \iota$ be given. Let $u2_incsp_1 : \iota \Rightarrow \iota$ be given. Let $k13_afproj : \iota \Rightarrow \iota$ be given. Let $k1_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u3_incsp_1 : \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $r1_incsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $l1_incsp_1 : \iota \Rightarrow o$ be given. Let $v1_incsp_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_incsp_1 (k14_afproj X0))) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_incsp_1 (k14_afproj X0))) \Rightarrow (\exists X3.(m1_subset_1 \\ & X3 (u2_incsp_1 (k14_afproj X0))) \wedge ((r1_incsp_1 (k14_afproj X0) \\ & X1 X3) \wedge (r1_incsp_1 (k14_afproj X0) X2 X3)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_incsp_1 (k14_afproj X0))) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_incsp_1 (k13_afproj X0))) \Rightarrow (\forall X3.(m1_subset_1 \\ & X3 (u2_incsp_1 (k14_afproj X0))) \Rightarrow (\forall X4.(m1_subset_1 X4 \\ & (u2_incsp_1 (k13_afproj X0))) \Rightarrow (((X2 = X1) \wedge (X4 = k4_tarski X3 np_2)) \Rightarrow \\ & ((r1_incsp_1 (k14_afproj X0) X1 X3) \Leftrightarrow (r1_incsp_1 (k13_afproj X0) \\ & X2 X4)))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u2_incsp_1 (k14_afproj X0))) \Rightarrow (m1_subset_1 \\ & (k4_tarski X1 np_2) (u2_incsp_1 (k13_afproj X0)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_incsp_1 (k14_afproj X0))) \Rightarrow (m1_subset_1 \\ & X1 (u1_incsp_1 (k13_afproj X0)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge \\ & ((\neg v1_xboole_0 X1)\wedge((m1_subset_1 X2 X0)\wedge(m1_subset_1 X3 X1))))\Rightarrow \\ & (k1_domain_1 X0 X1 X2 X3 = k4_tarski X2 X3) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0)\wedge((v1_diraf X0)\wedge(l1_analoaf X0)))\Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_incsp_1 (k13_afproj X0)))\Rightarrow(\forall X2. \\ & (m1_subset_1 X2 (u1_incsp_1 (k13_afproj X0)))\Rightarrow(\forall X3.(m1_subset_1 \\ & X3 (u2_incsp_1 (k13_afproj X0)))\Rightarrow(\forall X4.(m1_subset_1 X4 \\ & (u2_incsp_1 (k13_afproj X0)))\Rightarrow(\neg(r1_incsp_1 (k13_afproj X0) \\ & X1 X3)\wedge((r1_incsp_1 (k13_afproj X0) X1 X4)\wedge((r1_incsp_1 (k13_afproj \\ & X0) X2 X3)\wedge((r1_incsp_1 (k13_afproj X0) X2 X4)\wedge((X1\neq X2)\wedge(X3\neq X4)))))))))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(l1_incsp_1 X0)\Rightarrow(\neg v1_xboole_0 (u2_incsp_1 X0)) \quad (7)$$

Assume the following.

$$\forall X0.(l1_incsp_1 X0)\Rightarrow(\neg v1_xboole_0 (u1_incsp_1 X0)) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0)\wedge((v1_diraf X0)\wedge(l1_analoaf X0)))\Rightarrow \\ & ((v1_incsp_1 (k14_afproj X0))\wedge(l1_incsp_1 (k14_afproj X0))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0)\wedge((v1_diraf X0)\wedge(l1_analoaf X0)))\Rightarrow \\ & ((v1_incsp_1 (k13_afproj X0))\wedge(l1_incsp_1 (k13_afproj X0))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_incsp_1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_incsp_1 \\ & X0))\Rightarrow(\forall X2.(m1_subset_1 X2 (u2_incsp_1 X0))\Rightarrow((r1_incsp_1 \\ & X0 X1 X2)\Leftrightarrow(k1_domain_1 (u1_incsp_1 X0) (u2_incsp_1 X0) X1 X2 \in u3_incsp_1 \\ & X0)))) \end{aligned} \quad (11)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0)\wedge((v1_diraf X0)\wedge(l1_analoaf X0)))\Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_incsp_1 (k14_afproj X0)))\Rightarrow(\forall X2. \\ & (m1_subset_1 X2 (u1_incsp_1 (k14_afproj X0)))\Rightarrow(\forall X3.(m1_subset_1 \\ & X3 (u2_incsp_1 (k13_afproj X0)))\Rightarrow(\neg(X1\neq X2)\wedge((k1_domain_1 (u1_incsp_1 \\ & (k14_afproj X0)) (u2_incsp_1 (k13_afproj X0)) X1 X3 \in u3_incsp_1 \\ & (k13_afproj X0))\wedge((k1_domain_1 (u1_incsp_1 (k14_afproj X0)) \\ & (u2_incsp_1 (k13_afproj X0)) X2 X3 \in u3_incsp_1 (k13_afproj X0))\wedge \\ & (\forall X4.(m1_subset_1 X4 (u2_incsp_1 (k14_afproj X0)))\Rightarrow(X3\neq \\ & k4_tarski X4 np_2)))))))))) \end{aligned}$$