

t108_aofa_000 (TMY-
JEanM6YEtxQSBCCGtxwL6g6W93QB3tp4)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_unialg_1 : \iota \Rightarrow o$ be given. Let $v3_unialg_1 : \iota \Rightarrow o$ be given. Let $v4_unialg_1 : \iota \Rightarrow o$ be given. Let $v3_aofa_000 : \iota \Rightarrow o$ be given. Let $v4_aofa_000 : \iota \Rightarrow o$ be given. Let $v5_aofa_000 : \iota \Rightarrow o$ be given. Let $v6_aofa_000 : \iota \Rightarrow o$ be given. Let $l1_unialg_1 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $m1_aofa_000 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r7_aofa_000 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (1)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v2_unialg_1 X0) \wedge (v3_unialg_1 X0) \wedge (v4_unialg_1 X0) \wedge (v3_aofa_000 X0) \wedge \\ & ((v4_aofa_000 X0) \wedge (v5_aofa_000 X0) \wedge (v6_aofa_000 X0) \wedge (l1_unialg_1 X0)))))) \wedge ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 X1))) \Rightarrow \\ & (\forall X3. (m1_aofa_000 X3 X0 X1 X2) \Rightarrow ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (k2_zfmisc_1 X1 (u1_struct_0 X0)) X1) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 X1 (u1_struct_0 X0)) X1)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. (l1_unialg_1 X0) \Rightarrow (l1_struct_0 X0) \quad (4)$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\
& ((\neg v1_xboole_0 X0)\wedge(\neg v1_xboole_0 X1)\wedge(((v1_funct_1 X3)\wedge(\\
& v1_funct_2 X3 (k2_zfmisc_1 X0 X1) X2)\wedge(m1_subset_1 X3 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (k2_zfmisc_1 X0 X1) X2))))\wedge((m1_subset_1 X4 X0)\wedge \\
& (m1_subset_1 X5 X1))))\Rightarrow(m1_subset_1 (k2_binop_1 X0 X1 X2 X3 X4 \\
& X5) X2)
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0)\wedge(v2_unialg_1 X0)\wedge((v3_unialg_1 \\
& X0)\wedge(v4_unialg_1 X0)\wedge((v3_aofa_000 X0)\wedge((v4_aofa_000 X0)\wedge \\
& ((v5_aofa_000 X0)\wedge((v6_aofa_000 X0)\wedge(l1_unialg_1 X0))))))\Rightarrow \\
& (\forall X1.(\neg v1_xboole_0 X1)\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\
& X1))\Rightarrow(\forall X3.(m1_subset_1 X3 (u1_struct_0 X0))\Rightarrow(\forall X4. \\
& (m1_aofa_000 X4 X0 X1 X2)\Rightarrow(\forall X5.(r7_aofa_000 X0 X1 X2 X3 X4 \\
& X5)\Leftrightarrow(\forall X6.(m1_subset_1 X6 X1)\Rightarrow((X6 \in X5)\Rightarrow(k2_binop_1 X1 \\
& (u1_struct_0 X0) X1 X4 X6 X3 \in X5)))))))))
\end{aligned} \tag{6}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0)\wedge(v2_unialg_1 X0)\wedge((v3_unialg_1 \\
& X0)\wedge(v4_unialg_1 X0)\wedge((v3_aofa_000 X0)\wedge((v4_aofa_000 X0)\wedge \\
& ((v5_aofa_000 X0)\wedge((v6_aofa_000 X0)\wedge(l1_unialg_1 X0))))))\Rightarrow \\
& (\forall X1.(\neg v1_xboole_0 X1)\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\
& X1))\Rightarrow(\forall X3.(m1_aofa_000 X3 X0 X1 X2)\Rightarrow(\forall X4.(m1_subset_1 \\
& X4 (u1_struct_0 X0))\Rightarrow(r7_aofa_000 X0 X1 X2 X4 X3 X1))))))
\end{aligned}$$