

l94_group_9
(TMZL138a6FNsqN4hojvoEekEfUwCohnYiQ8)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_group_1 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $v3_group_9 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_group_9 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_group_9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k19_group_9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v2_group_9 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k15_group_9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k18_group_9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. r1_tarski X0 (k2_xboole_0 X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1_tarski X0 X1) \wedge (r1_tarski X1 X2)) \Rightarrow (r1_tarski X0 X2) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((m1_subset_1 X1 (k1_zfmisc_1 X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 X0))) \Rightarrow (k4_subset_1 X0 X1 X2 = k2_xboole_0 X1 X2) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v2_struct_0 X1) \wedge (v2_group_1 X1) \wedge (v3_group_1 X1) \wedge (v3_group_9 X1 X0) \wedge (l1_group_9 X1 X0))) \Rightarrow (\forall X2. (m1_group_9 X2 X0 X1) \Rightarrow (\forall X3. (m1_group_9 X3 X0 X1) \Rightarrow ((r1_tarski (u1_struct_0 X2) (u1_struct_0 X3)) \Rightarrow (m1_group_9 X2 X0 X3)))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((m1_subset_1 X1 (k1_zfmisc_1 X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 X0))) \Rightarrow (m1_subset_1 (k4_subset_1 X0 X1 X2) (k1_zfmisc_1 X0)) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((\neg v2_struct_0 \\ & X1)\wedge((v2_group_1 X1)\wedge((v3_group_1 X1)\wedge((v3_group_9 X1 X0)\wedge(\\ & l1_group_9 X1 X0))))))\wedge((m1_group_9 X2 X0 X1)\wedge(m1_group_9 X3 X0 \\ & X1)))\Rightarrow((v2_group_9 (k19_group_9 X0 X1 X2 X3) X0)\wedge(m1_group_9 (\\ & k19_group_9 X0 X1 X2 X3) X0 X1)) \end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X1)\wedge((v2_group_1 \\ & X1)\wedge((v3_group_1 X1)\wedge((v3_group_9 X1 X0)\wedge(l1_group_9 X1 X0))))))\wedge \\ & (m1_group_9 X2 X0 X1))\Rightarrow(m1_subset_1 (k15_group_9 X0 X1 X2) (k1_zfmisc_1 \\ & (u1_struct_0 X1))) \end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v2_struct_0 X1)\wedge((v2_group_1 X1)\wedge(\\ & (v3_group_1 X1)\wedge((v3_group_9 X1 X0)\wedge(l1_group_9 X1 X0))))))\Rightarrow(\\ & \forall X2.(m1_group_9 X2 X0 X1)\Rightarrow(\forall X3.(m1_group_9 X3 X0 \\ & X1)\Rightarrow(k19_group_9 X0 X1 X2 X3 = k18_group_9 X0 X1 (k4_subset_1 (u1_struct_0 \\ & X1) (k15_group_9 X0 X1 X2) (k15_group_9 X0 X1 X3)))))) \end{aligned} \tag{8}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v2_struct_0 X1)\wedge((v2_group_1 X1)\wedge(\\ & (v3_group_1 X1)\wedge((v3_group_9 X1 X0)\wedge(l1_group_9 X1 X0))))))\Rightarrow(\\ & \forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X1)))\Rightarrow(\\ & \forall X3.(((v2_group_9 X3 X0)\wedge(m1_group_9 X3 X0 X1))\Rightarrow((X3 = k18_group_9 \\ & X0 X1 X2)\Leftrightarrow((r1_tarski X2 (u1_struct_0 X3))\wedge(\forall X4.((v2_group_9 \\ & X4 X0)\wedge(m1_group_9 X4 X0 X1))\Rightarrow((r1_tarski X2 (u1_struct_0 X4))\Rightarrow \\ & (m1_group_9 X3 X0 X4)))))))))) \end{aligned} \tag{9}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v2_struct_0 X1)\wedge((v2_group_1 X1)\wedge(\\ & (v3_group_1 X1)\wedge((v3_group_9 X1 X0)\wedge(l1_group_9 X1 X0))))))\Rightarrow(\\ & \forall X2.(m1_group_9 X2 X0 X1)\Rightarrow(k15_group_9 X0 X1 X2 = u1_struct_0 \\ & X2)) \end{aligned} \tag{10}$$

Theorem 1

$$\begin{aligned} & \forall X0.\forall X1.((\neg v2_struct_0 X1)\wedge((v2_group_1 X1)\wedge(\\ & (v3_group_1 X1)\wedge((v3_group_9 X1 X0)\wedge(l1_group_9 X1 X0))))))\Rightarrow(\\ & \forall X2.(m1_group_9 X2 X0 X1)\Rightarrow(\forall X3.(m1_group_9 X3 X0 \\ & X1)\Rightarrow(m1_group_9 X2 X0 (k19_group_9 X0 X1 X2 X3)))) \end{aligned}$$