

t25_aff_4

(TMMxBhcUiFgAXKfWaqJfovHYn27NctLpr5U)

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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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v1_aff_4 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_aff_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_aff_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow ((r1_aff_1 X0 X1 X1 X2) \wedge ((r1_aff_1 X0 X1 X2 \\ & X2) \wedge (r1_aff_1 X0 X1 X2 X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 \\ & (u1_struct_0 X0))) \Rightarrow (\forall X4.(m1_subset_1 X4 (k1_zfmisc_1 \\ & (u1_struct_0 X0))) \Rightarrow (((v1_aff_4 X3 X0) \wedge ((v1_aff_4 X4 X0) \wedge ((X1 \in \\ & X3) \wedge ((X2 \in X3) \wedge ((X1 \in X4) \wedge (X2 \in X4)))))) \Rightarrow ((X3 = X4) \vee ((X1 = X2) \vee (v1_aff_1 \\ & (k9_subset_1 (u1_struct_0 X0) X3 X4) X0))))))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\ & X0)) \Rightarrow ((r1_aff_1 X0 X1 X2 X3) \Leftrightarrow (\exists X4.(m1_subset_1 X4 (k1_zfmisc_1 \\ & (u1_struct_0 X0))) \wedge ((v1_aff_1 X4 X0) \wedge ((X1 \in X4) \wedge ((X2 \in X4) \wedge (X3 \in \\ & X4)))))))))) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow (k9_subset_1 X0 X1 X2 = k3_xboole_0 X1 X2) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 X0))\Rightarrow(m1_subset_1 (k9_subset_1 X0 X1 X2) (k1_zfmisc_1 X0)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k3_xboole_0 X0 X1)\Leftrightarrow(\forall X3.(X3 \in X2)\Leftrightarrow((X3 \in X0)\wedge(X3 \in X1))) \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0)\wedge((v1_diraf X0)\wedge(l1_analoaf X0)))\Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0))\Rightarrow(\forall X3.(m1_subset_1 X3 (u1_struct_0 \\ & X0))\Rightarrow(\forall X4.(m1_subset_1 X4 (k1_zfmisc_1 (u1_struct_0 X0))\Rightarrow \\ & (\forall X5.(m1_subset_1 X5 (k1_zfmisc_1 (u1_struct_0 X0))\Rightarrow \\ & (((v1_aff_4 X4 X0)\wedge((v1_aff_4 X5 X0)\wedge((X1 \in X4)\wedge((X2 \in X4)\wedge((X3 \in \\ & X4)\wedge((X1 \in X5)\wedge((X2 \in X5)\wedge(X3 \in X5))))))))))\Rightarrow((r1_aff_1 X0 X1 X2 X3)\vee \\ & (X4 = X5))))))))) \end{aligned}$$