

l34_homothet

(TMTgR8yTkLLhs7VtMC65pGAQwoEuSPxHcjB)

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Let $v7_struct_0 : \iota \Rightarrow o$ be given. Let $v1_diraf : \iota \Rightarrow o$ be given. Let $v2_diraf : \iota \Rightarrow o$ 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 $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_aff_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_analoaf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_aff_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\ & \quad (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.((\\ & v1_aff_1 X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow \\ & \quad (r2_aff_1 X0 X1 X1 X2))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\ & \quad (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\ & \quad ((\exists X2.(m1_subset_1 X2 (u1_struct_0 X0)) \wedge (\exists X3.(\\ & m1_subset_1 X3 (u1_struct_0 X0)) \wedge (r2_aff_1 X0 X2 X3 X1))) \Rightarrow (v1_aff_1 \\ & \quad X1 X0))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \tag{3}$$

Assume the following.

$$\forall X0.(l1_analoaf X0) \Rightarrow (l1_struct_0 X0) \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge \\ & (((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))))))\wedge(m1_subset_1 X3 X0))\Rightarrow(m1_subset_1 (\\ & k3_funct_2 X0 X1 X2 X3) X1) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(l1_struct_0 X0)\Rightarrow((v2_struct_0 X0)\Rightarrow(v7_struct_0 X0)) \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0)\wedge((v1_diraf X0)\wedge((v2_diraf X0)\wedge \\ & (l1_analoaf X0))))\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow(\forall X3. \\ & (m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X0))\Rightarrow(\forall X4. \\ & ((v1_funct_1 X4)\wedge((v1_funct_2 X4 (u1_struct_0 X0) (u1_struct_0 \\ & X0))\wedge((v3_funct_2 X4 (u1_struct_0 X0) (u1_struct_0 X0))\wedge(m1_subset_1 \\ & X4 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0))))))\Rightarrow \\ & (((r2_aff_1 X0 X1 X2 X3)\wedge(\forall X5.(m1_subset_1 X5 (u1_struct_0 \\ & X0))\Rightarrow(\forall X6.(m1_subset_1 X6 (u1_struct_0 X0))\Rightarrow((k3_funct_2 \\ & (u1_struct_0 X0) (u1_struct_0 X0) X4 X5 = X6)\Leftrightarrow(((X5 \in X3)\wedge(X5 = X6))\vee \\ & ((\neg X5 \in X3)\wedge(\exists X7.(m1_subset_1 X7 (u1_struct_0 X0))\wedge(\exists X8. \\ & (m1_subset_1 X8 (u1_struct_0 X0))\wedge((X7 \in X3)\wedge((X8 \in X3)\wedge((r2_analoaf \\ & X0 X7 X1 X8 X5)\wedge((r2_analoaf X0 X7 X2 X8 X6)\wedge(r2_aff_1 X0 X5 X6 X3))))))))))\Rightarrow \\ & (\forall X5.(m1_subset_1 X5 (u1_struct_0 X0))\Rightarrow(r2_aff_1 X0 X5 \\ & (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 X0) X4 X5) X3)))))) \end{aligned}$$