

t64_glib_000
(TMHiYkDoAQVQKZai87zmGGkMuijYi7cptuS)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_glib_000 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_glib_000 : \iota \Rightarrow \iota$ be given. Let $k28_glib_000 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_glib_000 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_glib_000 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_glib_000 : \iota \Rightarrow \iota$ be given. Let $k11_glib_000 : \iota \Rightarrow \iota$ be given. Let $k21_glib_000 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1. \forall X2. \\ \forall X3. (m1_subset_1 X3 (k6_glib_000 X0)) \Rightarrow ((r1_glib_000 X0 \\ X3 X2 X1) \Rightarrow (X1 \in k28_glib_000 X0 X3))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1. \forall X2. \\ (m1_subset_1 X2 (k6_glib_000 X0)) \Rightarrow ((X1 \in k28_glib_000 X0 X2) \Leftrightarrow (\\ (X1 \in k7_glib_000 X0) \wedge ((k1_funct_1 (k10_glib_000 X0) X1 = X2) \vee (\\ k1_funct_1 (k11_glib_000 X0) X1 = X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (k7_glib_000 X0 = \\ k21_glib_000 X0 (k6_glib_000 X0)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ & \quad X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1. \forall X2. \\ & ((X1 \in k7_glib_000 X0) \wedge ((k1_funct_1 (k10_glib_000 X0) X1 \in X2) \wedge \\ & (k1_funct_1 (k11_glib_000 X0) X1 \in X2))) \Leftrightarrow (X1 \in k21_glib_000 X0 X2)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ & \quad X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1. \forall X2. \\ & \forall X3. (r1_glib_000 X0 X1 X2 X3) \Leftrightarrow ((X3 \in k7_glib_000 X0) \wedge (((\\ & \quad k1_funct_1 (k10_glib_000 X0) X3 = X1) \wedge (k1_funct_1 (k11_glib_000 \\ & \quad X0) X3 = X2)) \vee ((k1_funct_1 (k10_glib_000 X0) X3 = X2) \wedge (k1_funct_1 \\ & \quad (k11_glib_000 X0) X3 = X1)))))) \end{aligned} \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ & \quad X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1. \forall X2. \\ & (m1_subset_1 X2 (k6_glib_000 X0)) \Rightarrow ((X1 \in k28_glib_000 X0 X2) \Leftrightarrow (\\ & \quad \exists X3. (m1_subset_1 X3 (k6_glib_000 X0) \wedge (r1_glib_000 X0 \\ & \quad \quad X2 X3 X1)))))) \end{aligned}$$