

t93_glib_000 (TMaMtB-
jweeAU2UWqT3htSCdzpjz9XVTLg4L)

October 27, 2020

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 $m2_glib_000 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r5_glib_000 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_glib_000 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k24_glib_000 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k25_glib_000 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_glib_000 : \iota \Rightarrow \iota$ be given. Let $k6_glib_000 : \iota \Rightarrow \iota$ 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 $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k21_glib_000 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.(m1_glib_000 \\ X1 X0) \Rightarrow (\forall X2.(m1_glib_000 X2 X0) \Rightarrow (((k24_glib_000 X0 X1 = \\ k24_glib_000 X0 X2) \wedge (k25_glib_000 X0 X1 = k25_glib_000 X0 X2)) \Rightarrow \\ (r5_glib_000 X1 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.((v1_relat_1 \\ X1) \wedge ((v4_relat_1 X1 k5_numbers) \wedge ((v1_funct_1 X1) \wedge ((v1_finset_1 \\ X1) \wedge (v1_glib_000 X1)))))) \Rightarrow (\forall X2.((v1_relat_1 X2) \wedge ((v4_relat_1 \\ X2 k5_numbers) \wedge ((v1_funct_1 X2) \wedge ((v1_finset_1 X2) \wedge (v1_glib_000 \\ X2)))))) \Rightarrow (((r5_glib_000 X0 X1) \wedge (r5_glib_000 X1 X2)) \Rightarrow (r5_glib_000 \\ X0 X2)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1.(((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge \\ ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \wedge ((\\ v1_relat_1 X1) \wedge ((v4_relat_1 X1 k5_numbers) \wedge ((v1_funct_1 X1) \wedge \\ ((v1_finset_1 X1) \wedge (v1_glib_000 X1)))))) \Rightarrow ((r5_glib_000 X0 X1) \Rightarrow \\ (r5_glib_000 X1 X0)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge \\ & ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \wedge (m1_glib_000 \\ & X1 X0)) \Rightarrow (k25_glib_000 X0 X1 = k7_glib_000 X1) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge \\ & ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \wedge (m1_glib_000 \\ & X1 X0)) \Rightarrow (k24_glib_000 X0 X1 = k6_glib_000 X1) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_relat_1 X0) \wedge ((v4_relat_1 \\ & X0 k5_numbers) \wedge ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 \\ & X0)))))) \Rightarrow (\forall X3. (m2_glib_000 X3 X0 X1 X2) \Rightarrow (m1_glib_000 X3 \\ & X0)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ & X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1. (m1_glib_000 \\ & X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge ((v4_relat_1 X1 k5_numbers) \wedge ((v1_funct_1 \\ & X1) \wedge ((v1_finset_1 X1) \wedge (v1_glib_000 X1)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ & X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1. \forall X2. \\ & \forall X3. (m1_glib_000 X3 X0) \Rightarrow (((\neg v1_xboole_0 X1) \wedge (m1_subset_1 \\ & X1 (k1_zfmisc_1 (k6_glib_000 X0)))) \wedge (r1_tarski X2 (k21_glib_000 \\ & X0 X1))) \Rightarrow ((m2_glib_000 X3 X0 X1 X2) \Leftrightarrow ((k24_glib_000 X0 X3 = X1) \wedge (\\ & k25_glib_000 X0 X3 = X2)))) \wedge ((\neg((\neg v1_xboole_0 X1) \wedge (m1_subset_1 \\ & X1 (k1_zfmisc_1 (k6_glib_000 X0)))) \wedge (r1_tarski X2 (k21_glib_000 \\ & X0 X1))) \Rightarrow ((m2_glib_000 X3 X0 X1 X2) \Leftrightarrow (r5_glib_000 X3 X0)))) \end{aligned} \quad (8)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ & X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1. \forall X2. \\ & \forall X3. (m2_glib_000 X3 X0 X1 X2) \Rightarrow (\forall X4. (m2_glib_000 \\ & X4 X0 X1 X2) \Rightarrow (r5_glib_000 X3 X4))) \end{aligned}$$