

t47_glib_000
(TMaiJy8ed2C1SKLVbmbZqtHn5pRf796yqF6)

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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 $v4_glib_000 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_glib_000 : \iota \Rightarrow \iota$ be given. Let $m2_glib_000 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k21_glib_000 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k24_glib_000 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k25_glib_000 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_glib_000 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_glib_000 : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r5_glib_000 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ & X0) \wedge ((v1_finset_1 X0) \wedge ((v1_glib_000 X0) \wedge (\neg v4_glib_000 X0)))))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (k6_glib_000 X0)) \Rightarrow (\neg v1_xboole_0 \\ & (k6_subset_1 (k6_glib_000 X0) (k6_domain_1 (k6_glib_000 X0) X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow \\ & (k6_domain_1 X0 X1 = k1_tarski X1) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge \\ & ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))) \wedge (m1_glib_000 \\ & X1 X0)) \Rightarrow (k25_glib_000 X0 X1 = k7_glib_000 X1) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge \\ & ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))) \wedge (m1_glib_000 \\ & X1 X0)) \Rightarrow (k24_glib_000 X0 X1 = k6_glib_000 X1) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\neg v1_xboole_0 (k6_glib_000 X0)) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X3. (m2_glib_000 X3 X0 X1 X2) \Rightarrow (m1_glib_000 X3 X0)) \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. m1_subset_1 (k6_subset_1 X0 X1) (k1_zfmisc_1 X0) \quad (7)$$

Assume the following.

$$\forall X0. \forall X1. (((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \wedge (m1_glib_000 X1 X0)) \Rightarrow ((\neg v1_xboole_0 (k24_glib_000 X0 X1)) \wedge (m1_subset_1 (k24_glib_000 X0 X1) (k1_zfmisc_1 (k6_glib_000 X0)))) \quad (8)$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1. \forall X2. \\ & \forall X3. (m1_glib_000 X3 X0) \Rightarrow (((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k6_glib_000 X0)))) \wedge (r1_tarski X2 (k21_glib_000 X0 X1)))) \Rightarrow ((m2_glib_000 X3 X0 X1 X2) \Leftrightarrow ((k24_glib_000 X0 X3 = X1) \wedge (k25_glib_000 X0 X3 = X2))) \wedge ((\neg (\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k6_glib_000 X0)))) \wedge (r1_tarski X2 (k21_glib_000 X0 X1)))) \Rightarrow ((m2_glib_000 X3 X0 X1 X2) \Leftrightarrow (r5_glib_000 X3 X0)))) \quad (10) \end{aligned}$$

Theorem 1

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0) \wedge (\neg v4_glib_000 X0)))))) \Rightarrow \\ & (\forall X1. (m1_subset_1 X1 (k6_glib_000 X0)) \Rightarrow (\forall X2. (m2_glib_000 X2 X0 (k6_subset_1 (k6_glib_000 X0) (k1_tarski X1)) (k21_glib_000 X0 (k6_subset_1 (k6_glib_000 X0) (k1_tarski X1)))) \Rightarrow ((k24_glib_000 X0 X2 = k6_subset_1 (k6_glib_000 X0) (k6_domain_1 (k6_glib_000 X0) X1)) \wedge (k25_glib_000 X0 X2 = k21_glib_000 X0 (k6_subset_1 (k6_glib_000 X0) (k6_domain_1 (k6_glib_000 X0) X1)))))) \end{aligned}$$