

l31_glib_002
(TMPdXExrC2xem6YBvkgc1dTicysPLY86Rr9)

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 $v1_glib_002 : \iota \Rightarrow o$ 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 $v5_glib_002 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_0 : \iota$ be given. Let $k1_ordinal1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_glib_002 : \iota \Rightarrow \iota$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $v1_card_1 : \iota \Rightarrow o$ be given. Let $m1_glib_000 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_glib_002 : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski X0 (k1_tarski X1)) \Leftrightarrow ((X0 = k1_xboole_0) \vee (X0 = k1_tarski X1)) \quad (2)$$

Assume the following.

$$\forall X0.k2_xboole_0 X0 k1_xboole_0 = X0 \quad (3)$$

Assume the following.

$$v1_xboole_0 np_0 \quad (4)$$

Assume the following.

$$k1_ordinal1 np_0 = np_1 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v3_ordinal1 X0) \wedge (v3_ordinal1 X1)) \Rightarrow (r1_ordinal1 X0 X1) \Leftrightarrow (r1_tarski X0 X1) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge ((v1_glib_000 X0) \wedge (v1_glib_002 X0)))))) \Rightarrow \\ (\forall X1.(m1_subset_1 X1 (k6_glib_000 X0)) \Rightarrow ((\neg v5_glib_002 \\ X1 X0) \Leftrightarrow (\forall X2.(m2_glib_000 X2 X0 (k6_subset_1 (k6_glib_000 \\ X0) (k1_tarski X1)) (k21_glib_000 X0 (k6_subset_1 (k6_glib_000 \\ X0) (k1_tarski X1)))) \Rightarrow (r1_ordinal1 (k4_glib_002 X2) (k4_glib_002 \\ X0)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow ((v1_glib_002 X0) \Leftrightarrow \\ (k4_glib_002 X0 = np_1)) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow ((\neg v1_xboole_0 (k1_card_1 X0)) \wedge \\ (v1_card_1 (k1_card_1 X0))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. ((v1_relat_1 X0) \wedge ((v4_relat_1 \\ X0 k5_numbers) \wedge ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 \\ X0)))))) \Rightarrow (\forall X3.(m2_glib_000 X3 X0 X1 X2) \Rightarrow (m1_glib_000 X3 \\ X0)) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.(m1_glib_000 \\ X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge ((v4_relat_1 X1 k5_numbers) \wedge ((v1_funct_1 \\ X1) \wedge ((v1_finset_1 X1) \wedge (v1_glib_000 X1)))))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (v1_card_1 (k4_glib_002 \\ X0)) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow ((\neg v1_xboole_0 \\ (k3_glib_002 X0)) \wedge (m1_subset_1 (k3_glib_002 X0) (k1_zfmisc_1 \\ (k1_zfmisc_1 (k6_glib_000 X0)))))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (k4_glib_002 X0 = \\ k1_card_1 (k3_glib_002 X0)) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.k1_ordinal1\ X0 = k2_xboole_0\ X0\ (k1_tarSKI\ X0) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.k2_xboole_0\ X0\ X1 = k2_xboole_0\ X1\ X0 \quad (16)$$

Assume the following.

$$\forall X0.(v1_card_1\ X0) \Rightarrow (v3_ordinal1\ X0) \quad (17)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_relat_1\ X0) \wedge ((v4_relat_1\ X0\ k5_numbers) \wedge ((v1_funct_1 \\ & X0) \wedge ((v1_finset_1\ X0) \wedge ((v1_glib_000\ X0) \wedge (v1_glib_002\ X0)))))) \Rightarrow \\ & (\forall X1.(m1_subset_1\ X1\ (k6_glib_000\ X0)) \Rightarrow (\forall X2.(m2_glib_000 \\ & X2\ X0\ (k6_subset_1\ (k6_glib_000\ X0)\ (k1_tarSKI\ X1))\ (k21_glib_000 \\ & X0\ (k6_subset_1\ (k6_glib_000\ X0)\ (k1_tarSKI\ X1)))) \Rightarrow ((\neg v5_glib_002 \\ & X1\ X0) \Rightarrow (v1_glib_002\ X2)))) \end{aligned}$$