

t132_glib_001

(TMZjwYLyYjk5aRnzZYH9ZT5VX5pCqDyvWDq)

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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 $m3_glib_001 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_glib_000 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_glib_001 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $v1_abian : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_card_1 : \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_glib_000 : \iota \Rightarrow \iota$ be given. Let $k7_glib_000 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ & X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))) \Rightarrow (\forall X1.(m3_glib_001 \\ & X1 X0) \Rightarrow (\forall X2.\forall X3.(r1_glib_000 X0 (k4_glib_001 X0 \\ & X1) X3 X2) \Rightarrow (k3_finseq_1 (k10_glib_001 X0 X1 X2) = k2_nat_1 (k3_finseq_1 \\ & X1) np_2))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_abian X0) \wedge (m1_subset_1 X0 k5_numbers)) \Rightarrow (\forall X1. \\ & ((\neg v1_abian X1) \wedge (m1_subset_1 X1 k5_numbers)) \Rightarrow ((\neg r1_xxreal_0 \\ & X1 X0) \Leftrightarrow (r1_xxreal_0 (k2_nat_1 X0 np_2) X1))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.((v7_ordinal1 X0) \wedge (\neg v1_abian X0)) \Rightarrow (r1_xxreal_0 np_1 X0) \tag{3}$$

Assume the following.

$$\begin{aligned} & ((v2_xreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xreal_0 \ X0) \wedge (v1_xreal_0 \ X1)) \Rightarrow (r1_xreal_0 \ X0 \ X0) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 \ X0) \wedge ((\neg v1_xboole_0 \ X1) \wedge \\ & (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ & \ X2 \ X0 \ X1) \Leftrightarrow (m1_subset_1 \ X2 \ X1)) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 \ X1 \ X0) \Leftrightarrow (m1_finseq_1 \ X1 \ X0) \quad (7)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (8)$$

Assume the following.

$$\forall X0. ((v1_relat_1 \ X0) \wedge ((v1_funct_1 \ X0) \wedge (v1_finseq_1 \ X0))) \Rightarrow (k3_finseq_1 \ X0 = k1_card_1 \ X0) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1 \ X0) \wedge ((v4_relat_1 \ X0 \ k5_numbers) \wedge ((v1_funct_1 \\ & \ X0) \wedge ((v1_finset_1 \ X0) \wedge (v1_glib_000 \ X0)))))) \Rightarrow (\forall X1. (m3_glib_001 \\ & \ X1 \ X0) \Rightarrow ((\neg(\neg v3_glib_001 \ X1 \ X0) \wedge (k3_finseq_1 \ X1 = np_1)) \wedge (\neg(k3_finseq_1 \\ & \ X1 \neq np_1) \wedge (v3_glib_001 \ X1 \ X0)))) \end{aligned} \quad (10)$$

Assume the following.

$$(\neg v1_xboole_0 \ k4_ordinal1) \wedge (v3_ordinal1 \ k4_ordinal1) \quad (11)$$

Assume the following.

$$\forall X0. (v1_finset_1 \ X0) \Rightarrow ((v1_finset_1 \ (k1_card_1 \ X0)) \wedge (v1_card_1 \ (k1_card_1 \ X0))) \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1_relat_1 \ X0) \wedge ((v4_relat_1 \ X0 \ k5_numbers) \wedge \\ & ((v1_funct_1 \ X0) \wedge ((v1_finset_1 \ X0) \wedge (v1_glib_000 \ X0)))))) \wedge (m3_glib_001 \\ & \ X1 \ X0) \Rightarrow ((\neg v1_xboole_0 \ (k1_card_1 \ X1)) \wedge ((v1_card_1 \ (k1_card_1 \\ & \ X1)) \wedge (\neg v1_abian \ (k1_card_1 \ X1)))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.(m3_glib_001 \\ X1 X0) \Rightarrow (m2_finseq_1 X1 (k2_xboole_0 (k6_glib_000 X0) (k7_glib_000 \\ X0)))) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(m2_finseq_1 X1 X0) \Rightarrow ((v1_funct_1 X1) \wedge (\\ (v1_finseq_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\ X0)))))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(m1_finseq_1 X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge (\\ (v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \end{aligned} \quad (16)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (17)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ (m2_subset_1 (k3_finseq_1 X0) k1_numbers k5_numbers) \end{aligned} \quad (18)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((v1_relat_1 X0) \wedge ((v4_relat_1 \\ X0 k5_numbers) \wedge ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 \\ X0)))))) \wedge (m3_glib_001 X1 X0) \Rightarrow (m3_glib_001 (k10_glib_001 X0 X1 \\ X2) X0) \end{aligned} \quad (19)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (20)$$

Assume the following.

$$\forall X0.((v3_ordinal1 X0) \wedge (v1_finset_1 X0)) \Rightarrow (v7_ordinal1 X0) \quad (21)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (v1_xxreal_0 X0) \quad (22)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finset_1 X0))) \end{aligned} \quad (23)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_xboole_0 X1)) \quad (24)$$

Assume the following.

$$\forall X0.(v1_card_1 X0) \Rightarrow (v3_ordinal1 X0) \quad (25)$$

Theorem 1

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.(m3_glib_001 \\ X1 X0) \Rightarrow (\forall X2.\forall X3.\neg(r1_glib_000 X0 (k4_glib_001 X0 \\ X1) X3 X2) \wedge (v3_glib_001 (k10_glib_001 X0 X1 X2) X0))) \end{aligned}$$