

t18_glib_002 (TMbdacEkv- gYrn1YpwbLQWCURFi87w6ovBMr)

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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 $k2_glib_002 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_glib_001 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_glib_001 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_glib_001 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $m3_glib_001 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 (k6_glib_000 X0)) \Rightarrow ((k3_finseq_1 (k1_glib_001 X0 X1) = np_1) \wedge \\ ((k1_funct_1 (k1_glib_001 X0 X1) np_1 = X1) \wedge ((k3_glib_001 X0 (\\ k1_glib_001 X0 X1) = X1) \wedge ((k4_glib_001 X0 (k1_glib_001 X0 X1) = X1) \wedge \\ (r1_glib_001 X0 X1 X1 (k1_glib_001 X0 X1))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge \\ ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \wedge (m1_subset_1 \\ X1 (k6_glib_000 X0)) \Rightarrow ((v1_glib_001 (k1_glib_001 X0 X1) X0) \wedge (\\ (v2_glib_001 (k1_glib_001 X0 X1) X0) \wedge (v3_glib_001 (k1_glib_001 \\ X0 X1) X0))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge \\ ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \wedge (m1_subset_1 \\ X1 (k6_glib_000 X0)) \Rightarrow ((\neg v1_xboole_0 (k2_glib_002 X0 X1)) \wedge (m1_subset_1 \\ (k2_glib_002 X0 X1) (k1_zfmisc_1 (k6_glib_000 X0)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge \\ & ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \wedge (m1_subset_1 \\ & X1 (k6_glib_000 X0)) \Rightarrow (m3_glib_001 (k1_glib_001 X0 X1) X0) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ & X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1. (m1_subset_1 \\ & X1 (k6_glib_000 X0)) \Rightarrow (\forall X2. ((\neg v1_xboole_0 X2) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k6_glib_000 X0)))))) \Rightarrow ((X2 = k2_glib_002 X0 X1) \Leftrightarrow \\ & (\forall X3. (X3 \in X2) \Leftrightarrow (\exists X4. ((v2_glib_001 X4 X0) \wedge (m3_glib_001 \\ & X4 X0)) \wedge (r1_glib_001 X0 X1 X3 X4)))))) \end{aligned} \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ & X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1. (m1_subset_1 \\ & X1 (k6_glib_000 X0)) \Rightarrow (X1 \in k2_glib_002 X0 X1)) \end{aligned}$$