

t54_glib_003 (TMZR-
rKyw1P1P5UsEndE9FoKRWxqk7hQE2Fv)

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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 $v2_glib_000 : \iota \Rightarrow o$ be given. Let $v3_glib_003 : \iota \Rightarrow o$ be given. Let $k6_glib_000 : \iota \Rightarrow \iota$ be given. Let $k14_glib_003 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Let $k13_glib_003 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge ((v1_glib_000 X0) \wedge (v3_glib_003 X0)))))) \Rightarrow \\ (\forall X1. \forall X2. (X1 \in k6_glib_000 X0) \Rightarrow (k14_glib_003 (k13_glib_003 \\ X0 X1 X2) = k2_xboole_0 (k14_glib_003 X0) (k1_tarski X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (v1_finset_1 X1) \Rightarrow ((\neg X0 \in X1) \Rightarrow (k5_card_1 \\ (k2_xboole_0 X1 (k1_tarski X0)) = k2_nat_1 (k5_card_1 X1) np_1)) \quad (2)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge ((v1_glib_000 X0) \wedge (v2_glib_000 X0)))))) \Rightarrow \\ (v1_finset_1 (k6_glib_000 X0)) \quad (3)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge ((v1_glib_000 X0) \wedge (v3_glib_003 X0)))))) \Rightarrow \\ (m1_subset_1 (k14_glib_003 X0) (k1_zfmisc_1 (k6_glib_000 X0))) \quad (4)$$

Assume the following.

$$\forall X0. (v1_finset_1 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 \\ X0)) \Rightarrow (v1_finset_1 X1)) \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 \ k5_numbers) \wedge ((v1_funct_1 \\ & \quad X0) \wedge ((v1_finset_1 X0) \wedge ((v1_glib_000 X0) \wedge ((v2_glib_000 X0) \wedge \\ & \quad (v3_glib_003 X0)))))) \Rightarrow (\forall X1. \forall X2. (X1 \in k6_glib_000 \\ X0) \Rightarrow ((X1 \in k14_glib_003 X0) \vee (k5_card_1 (k14_glib_003 (k13_glib_003 \\ X0 X1 X2)) = k2_nat_1 (k5_card_1 (k14_glib_003 X0) \ np_1))) \end{aligned}$$