

t37_facirc_1

(TML6mgxEHAEk41dwW78smMm79RtynNjYotf)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_circcomb : \iota \Rightarrow o$ be given. Let $l1_msualg_1 : \iota \Rightarrow o$ be given. Let $k3_msafree2 : \iota \Rightarrow \iota$ be given. Let $u4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k6_partfun1 : \iota \Rightarrow \iota$ be given. Let $k4_relat_1 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $u2_msualg_1 : \iota \Rightarrow \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. k6_partfun1\ X0 = k4_relat_1\ X0 \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1\ X1) \wedge (v5_relat_1\ X1\ X0)) \Rightarrow (k2_relset_1\ X0\ X1 = k10_xtuple_0\ X1) \quad (2)$$

Assume the following.

$$\forall X0. k10_xtuple_0\ (k4_relat_1\ X0) = X0 \quad (3)$$

Assume the following.

$$\forall X0. (l1_msualg_1\ X0) \Rightarrow ((v1_funct_1\ (u2_msualg_1\ X0)) \wedge ((v1_funct_2\ (u2_msualg_1\ X0)\ (u4_struct_0\ X0)\ (u1_struct_0\ X0)) \wedge (m1_subset_1\ (u2_msualg_1\ X0)\ (k1_zfmisc_1\ (k2_zfmisc_1\ (u4_struct_0\ X0)\ (u1_struct_0\ X0)))))) \quad (4)$$

Assume the following.

$$\forall X0. (l1_msualg_1\ X0) \Rightarrow ((v1_circcomb\ X0) \Leftrightarrow (u2_msualg_1\ X0 = k6_partfun1\ (u4_struct_0\ X0))) \quad (5)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0\ X0) \wedge (l1_msualg_1\ X0)) \Rightarrow (k3_msafree2\ X0 = k2_relset_1\ (u1_struct_0\ X0)\ (u2_msualg_1\ X0)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (8)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0)\wedge((v1_circcomb X0)\wedge(l1_msualg_1 X0)))\Rightarrow(k3_msafree2 X0 = u4_struct_0 X0)$$