

t78_abcmiz_0 (TMZHGuzNCfZMw- PuaBUYPe5W4qqWX9R9qLeK)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v3_orders_2 : \iota \Rightarrow o$ be given. Let $v4_orders_2 : \iota \Rightarrow o$ be given. Let $v5_orders_2 : \iota \Rightarrow o$ be given. Let $v1_lattice3 : \iota \Rightarrow o$ be given. Let $v1_abcmiz_0 : \iota \Rightarrow o$ be given. Let $v4_abcmiz_0 : \iota \Rightarrow o$ be given. Let $v9_abcmiz_0 : \iota \Rightarrow o$ be given. Let $v14_abcmiz_0 : \iota \Rightarrow o$ be given. Let $l3_abcmiz_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_rewrite1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k11_abcmiz_0 : \iota \Rightarrow \iota$ be given. Let $k12_abcmiz_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v8_rewrite1 : \iota \Rightarrow o$ be given. Let $v4_rewrite1 : \iota \Rightarrow o$ be given. Let $v3_rewrite1 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v2_rewrite1 : \iota \Rightarrow o$ be given. Let $r4_rewrite1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_rewrite1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r3_rewrite1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0. (& (v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v1_lattice3 X0) \wedge ((v1_abcmiz_0 X0) \wedge ((\neg v4_abcmiz_0 X0) \wedge \\ & ((v9_abcmiz_0 X0) \wedge ((v14_abcmiz_0 X0) \wedge (l3_abcmiz_0 X0))))))) \Rightarrow \\ & ((v8_rewrite1 (k11_abcmiz_0 X0)) \wedge (v4_rewrite1 (k11_abcmiz_0 \\ & X0))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (& (v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v1_lattice3 X0) \wedge ((v1_abcmiz_0 X0) \wedge ((\neg v4_abcmiz_0 X0) \wedge \\ & ((v9_abcmiz_0 X0) \wedge (l3_abcmiz_0 X0))))))) \Rightarrow (v3_rewrite1 (k11_abcmiz_0 \\ & X0)) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge ((v2_rewrite1 X0) \wedge (v4_rewrite1 X0))) \Rightarrow (\forall X1. r4_rewrite1 X0 X1 (k2_rewrite1 X0 X1)) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. (& (\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\ & X0) \wedge ((\neg v4_abcmiz_0 X0) \wedge (l3_abcmiz_0 X0)))) \Rightarrow (m1_subset_1 (\\ & k11_abcmiz_0 X0) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (\\ & u1_struct_0 X0)))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.\forall X2.(r4_rewrite1 X0 X1 X2) \Leftrightarrow ((r3_rewrite1 X0 X2) \wedge (r1_rewrite1 X0 X1 X2))) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v1_abcmiz_0 X0) \wedge ((\neg v4_abcmiz_0 X0) \wedge ((v9_abcmiz_0 X0) \wedge ((v14_abcmiz_0 X0) \wedge (l3_abcmiz_0 X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k12_abcmiz_0 X0 X1 = k2_rewrite1 (k11_abcmiz_0 X0) X1)) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v3_rewrite1 X0)) \Rightarrow ((v1_relat_1 X0) \wedge (v2_rewrite1 X0)) \quad (7)$$

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

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v1_abcmiz_0 X0) \wedge ((\neg v4_abcmiz_0 X0) \wedge ((v9_abcmiz_0 X0) \wedge ((v14_abcmiz_0 X0) \wedge (l3_abcmiz_0 X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (r1_rewrite1 (k11_abcmiz_0 X0) X1 (k12_abcmiz_0 X0 X1))) \end{aligned}$$