

t103_abc Miz_1

(TMdqVUfXs4NsSmDT8PFaJiHGokwLedJ1wmE)

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Let $v1_instalg1 : \iota \Rightarrow o$ be given. Let $v1_abc Miz_1 : \iota \Rightarrow o$ be given. Let $v3_abc Miz_1 : \iota \Rightarrow o$ be given. Let $l1_msualg_1 : \iota \Rightarrow o$ be given. Let $m3_abc Miz_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v8_abc Miz_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_abc Miz_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k13_abc Miz_1 : \iota \Rightarrow \iota$ be given. Let $k48_abc Miz_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k43_abc Miz_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_abc Miz_1 : \iota$ be given. Let $k46_abc Miz_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_abc Miz_1 : \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k47_abc Miz_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k45_abc Miz_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_card_3 : \iota \Rightarrow \iota$ be given. Let $u3_msualg_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_msafree3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k28_abc Miz_1 : \iota \Rightarrow \iota$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. k1_abc Miz_1 (k2_xboole_0 X0 X1) = k2_xboole_0 (k1_abc Miz_1 X0) (k1_abc Miz_1 X1) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_instalg1 X0) \wedge ((v1_abc Miz_1 X0) \wedge ((v3_abc Miz_1 \\ & X0) \wedge (l1_msualg_1 X0)))) \Rightarrow (\forall X1. (m3_abc Miz_1 X1 X0) \Rightarrow (\forall X2. \\ & ((v8_abc Miz_1 X2 X0) \wedge (m1_abc Miz_1 X2 X0 (k13_abc Miz_1 X0)))) \Rightarrow (\\ & k47_abc Miz_1 X0 (k43_abc Miz_1 X0 X1 X2) = k4_subset_1 k2_abc Miz_1 \\ & (k45_abc Miz_1 X0 X2) (k47_abc Miz_1 X0 X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((m1_subset_1 X1 (k1_zfmisc_1 X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 X0))) \Rightarrow (k4_subset_1 X0 X1 X2 = k2_xboole_0 X1 X2) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1_instalg1\ X0) \wedge ((v1_abcmiz_1\ X0) \wedge \\ & ((v3_abcmiz_1\ X0) \wedge (l1_msualg_1\ X0)))) \wedge (m1_subset_1\ X1\ (u1_struct_0 \\ & X0))) \Rightarrow (\forall X2. (m1_abcmiz_1\ X2\ X0\ X1) \Rightarrow (m1_subset_1\ X2\ (k3_card_3 \\ & (u3_msualg_1\ X0\ (k1_msafree3\ X0\ (k28_abcmiz_1\ X0)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1_instalg1\ X0) \wedge ((v1_abcmiz_1\ X0) \wedge \\ & ((v3_abcmiz_1\ X0) \wedge (l1_msualg_1\ X0)))) \wedge (m3_abcmiz_1\ X1\ X0)) \Rightarrow \\ & ((v1_finset_1\ (k48_abcmiz_1\ X0\ X1)) \wedge (m1_subset_1\ (k48_abcmiz_1 \\ & X0\ X1)\ (k1_zfmisc_1\ k2_abcmiz_1))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1_instalg1\ X0) \wedge ((v1_abcmiz_1\ X0) \wedge \\ & ((v3_abcmiz_1\ X0) \wedge (l1_msualg_1\ X0)))) \wedge (m3_abcmiz_1\ X1\ X0)) \Rightarrow \\ & (m1_subset_1\ (k47_abcmiz_1\ X0\ X1)\ (k1_zfmisc_1\ k2_abcmiz_1)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1_instalg1\ X0) \wedge ((v1_abcmiz_1\ X0) \wedge \\ & ((v3_abcmiz_1\ X0) \wedge (l1_msualg_1\ X0)))) \wedge (m1_subset_1\ X1\ (k3_card_3 \\ & (u3_msualg_1\ X0\ (k1_msafree3\ X0\ (k28_abcmiz_1\ X0)))))) \Rightarrow ((v1_finset_1 \\ & (k46_abcmiz_1\ X0\ X1)) \wedge (m1_subset_1\ (k46_abcmiz_1\ X0\ X1)\ (k1_zfmisc_1 \\ & k2_abcmiz_1))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1_instalg1\ X0) \wedge ((v1_abcmiz_1\ X0) \wedge \\ & ((v3_abcmiz_1\ X0) \wedge (l1_msualg_1\ X0)))) \wedge (m1_subset_1\ X1\ (k3_card_3 \\ & (u3_msualg_1\ X0\ (k1_msafree3\ X0\ (k28_abcmiz_1\ X0)))))) \Rightarrow (m1_subset_1 \\ & (k45_abcmiz_1\ X0\ X1)\ (k1_zfmisc_1\ k2_abcmiz_1)) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((v1_instalg1\ X0) \wedge ((v1_abcmiz_1 \\ & X0) \wedge ((v3_abcmiz_1\ X0) \wedge (l1_msualg_1\ X0)))) \wedge ((m3_abcmiz_1\ X1 \\ & X0) \wedge ((v8_abcmiz_1\ X2\ X0) \wedge (m1_abcmiz_1\ X2\ X0\ (k13_abcmiz_1\ X0)))))) \Rightarrow \\ & (m3_abcmiz_1\ (k43_abcmiz_1\ X0\ X1\ X2)\ X0) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0. ((v1_instalg1\ X0) \wedge ((v1_abcmiz_1\ X0) \wedge (l1_msualg_1\ X0))) \Rightarrow (m1_subset_1\ (k13_abcmiz_1\ X0)\ (u1_struct_0\ X0)) \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_instalg1\ X0)\wedge((v1_abcmiz_1\ X0)\wedge((v3_abcmiz_1 \\ X0)\wedge(l1_msualg_1\ X0))))\Rightarrow(\forall X1.(m3_abcmiz_1\ X1\ X0)\Rightarrow(k48_abcmiz_1 \\ X0\ X1 = k1_abcmiz_1\ (k47_abcmiz_1\ X0\ X1))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_instalg1\ X0)\wedge((v1_abcmiz_1\ X0)\wedge((v3_abcmiz_1 \\ X0)\wedge(l1_msualg_1\ X0))))\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k3_card_3 \\ (u3_msualg_1\ X0\ (k1_msafree3\ X0\ (k28_abcmiz_1\ X0))))))\Rightarrow(k46_abcmiz_1 \\ X0\ X1 = k1_abcmiz_1\ (k45_abcmiz_1\ X0\ X1))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.k2_xboole_0\ X0\ X1 = k2_xboole_0\ X1\ X0 \quad (13)$$

Theorem 1

$$\begin{aligned} \forall X0.((v1_instalg1\ X0)\wedge((v1_abcmiz_1\ X0)\wedge((v3_abcmiz_1 \\ X0)\wedge(l1_msualg_1\ X0))))\Rightarrow(\forall X1.(m3_abcmiz_1\ X1\ X0)\Rightarrow(\forall X2. \\ ((v8_abcmiz_1\ X2\ X0)\wedge(m1_abcmiz_1\ X2\ X0\ (k13_abcmiz_1\ X0)))\Rightarrow(\\ k48_abcmiz_1\ X0\ (k43_abcmiz_1\ X0\ X1\ X2) = k4_subset_1\ k2_abcmiz_1 \\ (k46_abcmiz_1\ X0\ X2)\ (k48_abcmiz_1\ X0\ X1)))) \end{aligned}$$