

t13_sf_mastr
(TMX5mew6piZvAR8kSkXuuyj1uEz7ux8BcxC)

October 27, 2020

Let $k1_sf_mastr : \iota \Rightarrow \iota$ be given. Let $k2_compos_1 : \iota \Rightarrow \iota$ be given. Let $k1_scmfsa_2 : \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $l1_compos_1 : \iota \Rightarrow o$ be given. Let $k2_compos_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_compos_1 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_compos_0 : \iota \Rightarrow o$ be given. Let $k4_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_ami_2 : \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_scmfsa_2 : \iota \Rightarrow o$ be given. Let $v2_amistd_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k17_scmfsa_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_3 : \iota$ be given. Let $k16_scmfsa_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15_scmfsa_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k14_scmfsa_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_amistd_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_scmfsa_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_scmfsa_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_scmfsa_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_scmfsa_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_scmfsa_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_compos_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k13_scmfsa_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_amistd_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k12_scmfsa_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_compos_0 : \iota \Rightarrow o$ be given. Let $k6_compos_0 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $v2_compos_0 : \iota \Rightarrow o$ be given. Let $v3_compos_0 : \iota \Rightarrow o$ be given. Let $l1_extpro_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_memstr_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_finsub_1 : \iota \Rightarrow \iota$ be given. Let $k2_scmfsa_2 : \iota$ be given. Let $v1_extpro_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $np_2 : \iota$ be given. Let $np_4 : \iota$ be given. Let $np_5 : \iota$ be given. Let $k5_scmfsa_m : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_7 : \iota$ be given. Let $np_8 : \iota$ be given. Let $k4_scmfsa_m : \iota \Rightarrow \iota$ be given. Let $np_9 : \iota$ be given. Let $np_10 : \iota$ be given. Let $np_11 : \iota$ be given. Let $np_12 : \iota$ be given. Assume the following.

$$\forall X0.(l1_compos_1 X0) \Rightarrow (k2_compos_0 (u1_compos_1 X0) (k2_compos_1 X0) = k6_numbers) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 X0))))\Rightarrow(\forall X2.(m2_subset_1 X2 X0 X1)\Leftrightarrow(m1_subset_1 X2 X1)) \quad (2)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (3)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v1_xboole_0 X0)\wedge(v1_compos_0 X0))\wedge(m1_subset_1 X1 X0))\Rightarrow(k2_compos_0 X0 X1 = k4_xtuple_0 X1) \quad (5)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1)\wedge(v3_ordinal1 k4_ordinal1) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_ami_2 X0)\wedge(m1_subset_1 X0 (u1_struct_0 k1_scmfsa_2)))\wedge(m1_scmfsa_2 X1))\Rightarrow(\neg v2_amistd_1 (k17_scmfsa_2 X0 X1) np_3 k1_scmfsa_2) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_ami_2 X0)\wedge(m1_subset_1 X0 (u1_struct_0 k1_scmfsa_2)))\wedge(m1_scmfsa_2 X1))\Rightarrow(\neg v2_amistd_1 (k16_scmfsa_2 X0 X1) np_3 k1_scmfsa_2) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v1_ami_2 X0)\wedge(m1_subset_1 X0 (u1_struct_0 k1_scmfsa_2)))\wedge(((v1_ami_2 X1)\wedge(m1_subset_1 X1 (u1_struct_0 k1_scmfsa_2)))\wedge(m1_scmfsa_2 X2)))\Rightarrow(\neg v2_amistd_1 (k15_scmfsa_2 X1 X0 X2) np_3 k1_scmfsa_2) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v1_ami_2 X0)\wedge(m1_subset_1 X0 (u1_struct_0 k1_scmfsa_2)))\wedge(((v1_ami_2 X1)\wedge(m1_subset_1 X1 (u1_struct_0 k1_scmfsa_2)))\wedge(m1_scmfsa_2 X2)))\Rightarrow(\neg v2_amistd_1 (k14_scmfsa_2 X1 X0 X2) np_3 k1_scmfsa_2) \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1_ami_2 X0) \wedge (m1_subset_1 X0 (u1_struct_0 \\ & k1_scmfsa_2))) \wedge ((v1_ami_2 X1) \wedge (m1_subset_1 X1 (u1_struct_0 \\ & k1_scmfsa_2)))) \Rightarrow (\neg v1_amistd_1 (k4_xtuple_0 (k10_scmfsa_2 X0 \\ & X1)) \text{ np_3 } k1_scmfsa_2) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1_ami_2 X0) \wedge (m1_subset_1 X0 (u1_struct_0 \\ & k1_scmfsa_2))) \wedge ((v1_ami_2 X1) \wedge (m1_subset_1 X1 (u1_struct_0 \\ & k1_scmfsa_2)))) \Rightarrow (\neg v1_amistd_1 (k4_xtuple_0 (k9_scmfsa_2 X0 \\ & X1)) \text{ np_3 } k1_scmfsa_2) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1_ami_2 X0) \wedge (m1_subset_1 X0 (u1_struct_0 \\ & k1_scmfsa_2))) \wedge ((v1_ami_2 X1) \wedge (m1_subset_1 X1 (u1_struct_0 \\ & k1_scmfsa_2)))) \Rightarrow (\neg v1_amistd_1 (k4_xtuple_0 (k8_scmfsa_2 X0 \\ & X1)) \text{ np_3 } k1_scmfsa_2) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1_ami_2 X0) \wedge (m1_subset_1 X0 (u1_struct_0 \\ & k1_scmfsa_2))) \wedge ((v1_ami_2 X1) \wedge (m1_subset_1 X1 (u1_struct_0 \\ & k1_scmfsa_2)))) \Rightarrow (\neg v1_amistd_1 (k4_xtuple_0 (k7_scmfsa_2 X0 \\ & X1)) \text{ np_3 } k1_scmfsa_2) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1_ami_2 X0) \wedge (m1_subset_1 X0 (u1_struct_0 \\ & k1_scmfsa_2))) \wedge ((v1_ami_2 X1) \wedge (m1_subset_1 X1 (u1_struct_0 \\ & k1_scmfsa_2)))) \Rightarrow (\neg v1_amistd_1 (k4_xtuple_0 (k6_scmfsa_2 X0 \\ & X1)) \text{ np_3 } k1_scmfsa_2) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1_ami_2 X0) \wedge (m1_subset_1 X0 (u1_struct_0 \\ & k1_scmfsa_2))) \wedge (m1_subset_1 X1 k5_numbers)) \Rightarrow ((\neg v4_compos_0 \\ & (k13_scmfsa_2 X1 X0) (u1_compos_1 k1_scmfsa_2)) \wedge ((v2_amistd_1 \\ & (k13_scmfsa_2 X1 X0) \text{ np_3 } k1_scmfsa_2) \wedge (\neg v4_amistd_1 (k13_scmfsa_2 \\ & X1 X0) \text{ np_3 } k1_scmfsa_2))) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1_ami_2 X0) \wedge (m1_subset_1 X0 (u1_struct_0 \\ & k1_scmfsa_2))) \wedge (m1_subset_1 X1 k5_numbers)) \Rightarrow ((\neg v4_compos_0 \\ & (k12_scmfsa_2 X1 X0) (u1_compos_1 k1_scmfsa_2)) \wedge ((v2_amistd_1 \\ & (k12_scmfsa_2 X1 X0) \text{ np_3 } k1_scmfsa_2) \wedge (\neg v4_amistd_1 (k12_scmfsa_2 \\ & X1 X0) \text{ np_3 } k1_scmfsa_2))) \end{aligned} \quad (17)$$

Assume the following.

$$v2_amistd_1 (k2_compos_1 k1_scmfsa_2) np_3 k1_scmfsa_2 \quad (18)$$

Assume the following.

$$v1_amistd_1 (k4_xtuple_0 (k2_compos_1 k1_scmfsa_2)) np_3 k1_scmfsa_2 \quad (19)$$

Assume the following.

$$\forall X0.((v1_compos_0 X0) \wedge (v5_compos_0 X0)) \Rightarrow (v4_compos_0 (k6_compos_0 X0) X0) \quad (20)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (21)$$

Assume the following.

$$\forall X0.(l1_compos_1 X0) \Rightarrow ((v1_compos_0 (u1_compos_1 X0)) \wedge ((v2_compos_0 (u1_compos_1 X0)) \wedge ((v3_compos_0 (u1_compos_1 X0)) \wedge (v5_compos_0 (u1_compos_1 X0)))))) \quad (22)$$

Assume the following.

$$\forall X0.\forall X1.(l1_extpro_1 X1 X0) \Rightarrow ((l1_memstr_0 X1 X0) \wedge (l1_compos_1 X1)) \quad (23)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (24)$$

Assume the following.

$$\forall X0.(l1_compos_1 X0) \Rightarrow (m1_subset_1 (k2_compos_1 X0) (u1_compos_1 X0)) \quad (25)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (u1_compos_1 k1_scmfsa_2)) \Rightarrow (m1_subset_1 (k1_sf_mastr X0) (k5_finsub_1 k2_scmfsa_2)) \quad (26)$$

Assume the following.

$$(v1_extpro_1 k1_scmfsa_2 np_3) \wedge (l1_extpro_1 k1_scmfsa_2 np_3) \quad (27)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 (u1_compos_1 k1_scmfsa_2)) \Rightarrow (\forall X1. \\
& (m1_subset_1 X1 (k5_finsub_1 k2_scmfsa_2)) \Rightarrow (((k2_compos_0 (\\
& u1_compos_1 k1_scmfsa_2) X0 \in k3_enumset1 np_1 np_2 np_3 np_4 \\
& np_5) \Rightarrow ((X1 = k1_sf_mastr X0) \Leftrightarrow (\exists X2. ((v1_ami_2 X2) \wedge (m1_subset_1 \\
& X2 (u1_struct_0 k1_scmfsa_2))) \wedge (\exists X3. ((v1_ami_2 X3) \wedge (\\
& m1_subset_1 X3 (u1_struct_0 k1_scmfsa_2))) \wedge ((\neg(X0 \neq k6_scmfsa_2 \\
& X2 X3) \wedge ((X0 \neq k7_scmfsa_2 X2 X3) \wedge ((X0 \neq k8_scmfsa_2 X2 X3) \wedge ((X0 \neq \\
& k9_scmfsa_2 X2 X3) \wedge (X0 \neq k10_scmfsa_2 X2 X3)))))) \wedge (X1 = k5_scmfsa_m \\
& X2 X3)))))) \wedge (((k2_compos_0 (u1_compos_1 k1_scmfsa_2) X0 = np_7) \vee \\
& (k2_compos_0 (u1_compos_1 k1_scmfsa_2) X0 = np_8)) \Rightarrow ((X1 = k1_sf_mastr \\
& X0) \Leftrightarrow (\exists X2. ((v1_ami_2 X2) \wedge (m1_subset_1 X2 (u1_struct_0 \\
& k1_scmfsa_2))) \wedge (\exists X3. (m2_subset_1 X3 k1_numbers k5_numbers) \wedge \\
& (((X0 = k12_scmfsa_2 X3 X2) \vee (X0 = k13_scmfsa_2 X3 X2)) \wedge (X1 = k4_scmfsa_m \\
& X2)))))) \wedge (((k2_compos_0 (u1_compos_1 k1_scmfsa_2) X0 = np_9) \vee \\
& (k2_compos_0 (u1_compos_1 k1_scmfsa_2) X0 = np_10)) \Rightarrow ((X1 = k1_sf_mastr \\
& X0) \Leftrightarrow (\exists X2. ((v1_ami_2 X2) \wedge (m1_subset_1 X2 (u1_struct_0 \\
& k1_scmfsa_2))) \wedge (\exists X3. ((v1_ami_2 X3) \wedge (m1_subset_1 X3 (\\
& u1_struct_0 k1_scmfsa_2))) \wedge (\exists X4. (m1_scmfsa_2 X4) \wedge ((\\
& (X0 = k14_scmfsa_2 X3 X2 X4) \vee (X0 = k15_scmfsa_2 X3 X2 X4)) \wedge (X1 = k5_scmfsa_m \\
& X2 X3)))))) \wedge (((k2_compos_0 (u1_compos_1 k1_scmfsa_2) X0 = np_11) \vee \\
& (k2_compos_0 (u1_compos_1 k1_scmfsa_2) X0 = np_12)) \Rightarrow ((X1 = k1_sf_mastr \\
& X0) \Leftrightarrow (\exists X2. ((v1_ami_2 X2) \wedge (m1_subset_1 X2 (u1_struct_0 \\
& k1_scmfsa_2))) \wedge (\exists X3. (m1_scmfsa_2 X3) \wedge (((X0 = k16_scmfsa_2 \\
& X2 X3) \vee (X0 = k17_scmfsa_2 X2 X3)) \wedge (X1 = k4_scmfsa_m X2)))))) \wedge (\neg \\
& (\neg k2_compos_0 (u1_compos_1 k1_scmfsa_2) X0 \in k3_enumset1 np_1 np_2 np_3 np_4 np_5) \wedge ((k2_compos_0 (u1_compos_1 k1_scmfsa_2) \\
& X0 \neq np_7) \wedge ((k2_compos_0 (u1_compos_1 k1_scmfsa_2) X0 \neq np_8) \wedge \\
& ((k2_compos_0 (u1_compos_1 k1_scmfsa_2) X0 \neq np_9) \wedge ((k2_compos_0 \\
& (u1_compos_1 k1_scmfsa_2) X0 \neq np_10) \wedge ((k2_compos_0 (u1_compos_1 \\
& k1_scmfsa_2) X0 \neq np_11) \wedge ((k2_compos_0 (u1_compos_1 k1_scmfsa_2) \\
& X0 \neq np_12) \wedge (\neg(X1 = k1_sf_mastr X0) \Leftrightarrow (X1 = k1_xboole_0))))))))))))) \\
& \hspace{15em} (28)
\end{aligned}$$

Assume the following.

$$\forall X0.(l1_compos_1 X0) \Rightarrow (k2_compos_1 X0 = k6_compos_0 (u1_compos_1 X0)) \tag{29}$$

Assume the following.

$$\forall X0.(v5_compos_0 X0) \Rightarrow (\neg v1_xboole_0 X0) \tag{30}$$

Theorem 1 $k1_sf_mastr (k2_compos_1 k1_scmfsa_2) = k1_xboole_0.$