

t1_sfmastr2 (TMJoP- baRp3U7fwKLRjApKeFwxTn8XEpVtqa)

October 27, 2020

Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_scmfsa_2 : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v5_funct_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_3 : \iota$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_compos_1 : \iota \Rightarrow \iota$ be given. Let $v1_ami_2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_afinsq_1 : \iota \Rightarrow o$ be given. Let $r5_scmfsa7b : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_scmfsa_m : \iota \Rightarrow \iota$ be given. Let $r6_scmfsa7b : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_sf_mastr : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_scmfsa6b : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $r4_scmfsa7b : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_extpro_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v5_relat_1 \\
& X0 (u1_compos_1 k1_scmfsa_2)) \wedge ((v1_funct_1 X0) \wedge (v1_partfun1 \\
& X0 k5_numbers)))) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((v4_relat_1 \\
& X1 (u1_struct_0 k1_scmfsa_2)) \wedge ((v1_funct_1 X1) \wedge ((v5_funct_1 \\
& X1 (k2_memstr_0 np_3 k1_scmfsa_2)) \wedge (v1_partfun1 X1 (u1_struct_0 \\
& k1_scmfsa_2)))) \Rightarrow (\forall X2.((\neg v1_xboole_0 X2) \wedge ((v1_relat_1 \\
& X2) \wedge ((v4_relat_1 X2 k5_numbers) \wedge ((v5_relat_1 X2 (u1_compos_1 \\
& k1_scmfsa_2)) \wedge ((v1_funct_1 X2) \wedge ((v1_finset_1 X2) \wedge (v1_afinsq_1 \\
& X2)))))) \Rightarrow (\forall X3.((v1_ami_2 X3) \wedge (m1_subset_1 X3 (u1_struct_0 \\
& k1_scmfsa_2))) \Rightarrow (\forall X4.(m2_subset_1 X4 k1_numbers k5_numbers) \Rightarrow \\
& (((r5_scmfsa7b X2 (k1_scmfsa_m X1) X0) \wedge (r6_scmfsa7b X2 (k1_scmfsa_m \\
& X1) X0)) \Rightarrow ((r4_scmfsa7b X2 X3) \vee (k1_funct_1 (k1_scmfsa6b X2 X1 X0) \\
& X3 = k1_funct_1 (k5_extpro_1 np_3 k1_scmfsa_2 (k1_funct_4 X0 X2) \\
& (k8_memstr_0 np_3 k1_scmfsa_2 (k1_scmfsa_m X1)) X4) X3))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 (u1_struct_0 k1_scmfsa_2)) \wedge \\
& ((v1_funct_1 X0) \wedge ((v5_funct_1 X0 (k2_memstr_0 np_3 k1_scmfsa_2)) \wedge \\
& (v1_partfun1 X0 (u1_struct_0 k1_scmfsa_2)))))) \Rightarrow (\forall X1. \\
& ((v1_relat_1 X1) \wedge ((v4_relat_1 X1 k5_numbers) \wedge ((v5_relat_1 X1 \\
& (u1_compos_1 k1_scmfsa_2)) \wedge ((v1_funct_1 X1) \wedge (v1_partfun1 X1 \\
& k5_numbers)))))) \Rightarrow (\forall X2. ((\neg v1_xboole_0 X2) \wedge ((v1_relat_1 \\
& X2) \wedge ((v4_relat_1 X2 k5_numbers) \wedge ((v5_relat_1 X2 (u1_compos_1 \\
& k1_scmfsa_2)) \wedge ((v1_funct_1 X2) \wedge ((v1_finset_1 X2) \wedge (v1_afinsq_1 \\
& X2)))))) \Rightarrow (\forall X3. ((v1_ami_2 X3) \wedge (m1_subset_1 X3 (u1_struct_0 \\
& k1_scmfsa_2))) \Rightarrow ((r5_scmfsa7b X2 X0 X1) \Rightarrow ((r4_scmfsa7b X2 X3) \vee \\
& (\forall X4. (m2_subset_1 X4 k1_numbers k5_numbers) \Rightarrow (k1_funct_1 \\
& (k5_extpro_1 np_3 k1_scmfsa_2 (k1_funct_4 X1 X2) (k8_memstr_0 \\
& np_3 k1_scmfsa_2 X0) X4) X3 = k1_funct_1 X0 X3))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_ami_2 X0) \wedge (m1_subset_1 X0 (u1_struct_0 k1_scmfsa_2))) \Rightarrow \\
& (\forall X1. ((\neg v1_xboole_0 X1) \wedge ((v1_relat_1 X1) \wedge ((v4_relat_1 \\
& X1 k5_numbers) \wedge ((v5_relat_1 X1 (u1_compos_1 k1_scmfsa_2)) \wedge (\\
& (v1_funct_1 X1) \wedge ((v1_finset_1 X1) \wedge (v1_afinsq_1 X1)))))) \Rightarrow (\\
& \neg(\neg X0 \in k2_sf_mastr X1) \wedge (r4_scmfsa7b X1 X0)))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& ((v2_xxreal_0 np_3) \wedge (m2_subset_1 np_3 k1_numbers k5_numbers)) \wedge \\
& ((m1_subset_1 np_3 k5_numbers) \wedge (m1_subset_1 np_3 k1_numbers))
\end{aligned} \tag{4}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 (u1_struct_0 k1_scmfsa_2)) \wedge \\
& ((v1_funct_1 X0) \wedge ((v5_funct_1 X0 (k2_memstr_0 np_3 k1_scmfsa_2)) \wedge \\
& (v1_partfun1 X0 (u1_struct_0 k1_scmfsa_2)))))) \Rightarrow ((v1_relat_1 \\
& (k1_scmfsa_m X0)) \wedge ((v4_relat_1 (k1_scmfsa_m X0) (u1_struct_0 \\
& k1_scmfsa_2)) \wedge ((v1_funct_1 (k1_scmfsa_m X0)) \wedge ((v5_funct_1 \\
& (k1_scmfsa_m X0) (k2_memstr_0 np_3 k1_scmfsa_2)) \wedge (v1_partfun1 \\
& (k1_scmfsa_m X0) (u1_struct_0 k1_scmfsa_2))))))
\end{aligned} \tag{6}$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 (u1_struct_0 k1_scmf_sa_2)) \wedge \\ & ((v1_funct_1 X0) \wedge ((v5_funct_1 X0 (k2_memstr_0 np_3 k1_scmf_sa_2)) \wedge \\ & (v1_partfun1 X0 (u1_struct_0 k1_scmf_sa_2)))))) \Rightarrow (\forall X1. \\ & ((v1_relat_1 X1) \wedge ((v4_relat_1 X1 k5_numbers) \wedge ((v5_relat_1 X1 \\ & (u1_compos_1 k1_scmf_sa_2)) \wedge ((v1_funct_1 X1) \wedge (v1_partfun1 X1 \\ & k5_numbers)))))) \Rightarrow (\forall X2.((v1_ami_2 X2) \wedge (m1_subset_1 X2 \\ & (u1_struct_0 k1_scmf_sa_2))) \Rightarrow (\forall X3.((\neg v1_xboole_0 X3) \wedge \\ & ((v1_relat_1 X3) \wedge ((v4_relat_1 X3 k5_numbers) \wedge ((v5_relat_1 X3 \\ & (u1_compos_1 k1_scmf_sa_2)) \wedge ((v1_funct_1 X3) \wedge ((v1_finset_1 \\ & X3) \wedge (v1_afinsq_1 X3)))))) \Rightarrow (((r5_scmf_sa7b X3 (k1_scmf_sa_m X0) \\ & X1) \wedge (r6_scmf_sa7b X3 (k1_scmf_sa_m X0) X1)) \Rightarrow ((X2 \in k2_sf_mastr X3) \vee \\ & (k1_funct_1 (k1_scmf_sa6b X3 X0 X1) X2 = k1_funct_1 (k1_scmf_sa_m \\ & X0) X2)))))) \end{aligned}$$