

t3_scmfsa8c

(TMGup9MyGpj7BuLAzCFVop5U8FifjSjNiXU)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k1_scmfsa_2 : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ 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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_afinsq_1 : \iota \Rightarrow o$ be given. Let $r8_pboole : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_scmfsa6b : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_scmfsa_m : \iota \Rightarrow \iota$ be given. Let $k6_extpro_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v5_relat_1 \\
& X0 (u1_compos_1 k1_scmfsa_2)) \wedge ((v1_funct_1 X0) \wedge (v1_partfun1 \\
& X0 k5_numbers)))))) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((v4_relat_1 \\
& X1 (u1_struct_0 k1_scmfsa_2)) \wedge ((v1_funct_1 X1) \wedge ((v5_funct_1 \\
& X1 (k2_memstr_0 np_3 k1_scmfsa_2)) \wedge (v1_partfun1 X1 (u1_struct_0 \\
& k1_scmfsa_2)))))) \Rightarrow (\forall X2.((\neg v1_xboole_0 X2) \wedge ((v1_relat_1 \\
& X2) \wedge ((v4_relat_1 X2 k5_numbers) \wedge ((v5_relat_1 X2 (u1_compos_1 \\
& k1_scmfsa_2)) \wedge ((v1_funct_1 X2) \wedge ((v1_finset_1 X2) \wedge (v1_afinsq_1 \\
& X2)))))) \Rightarrow (r8_pboole (u1_struct_0 k1_scmfsa_2) (k6_extpro_1 \\
& np_3 k1_scmfsa_2 (k1_funct_4 X0 X2) (k1_scmfsa_m X1)) (k1_scmfsa6b \\
& X2 X1 X0))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 (u1_struct_0 k1_scmfsa_2)) \wedge \\
& ((v1_funct_1 X0) \wedge (v5_funct_1 X0 (k2_memstr_0 np_3 k1_scmfsa_2)))))) \Rightarrow \\
& (k1_scmfsa_m (k1_scmfsa_m X0) = k1_scmfsa_m X0)
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 (u1_struct_0 k1_scmfsa_2)) \wedge \\
& ((v1_funct_1 X0) \wedge ((v5_funct_1 X0 (k2_memstr_0 np_3 k1_scmfsa_2)) \wedge \\
& (v1_partfun1 X0 (u1_struct_0 k1_scmfsa_2)))))) \Rightarrow ((v1_relat_1 \\
& (k1_scmfsa_m X0)) \wedge ((v4_relat_1 (k1_scmfsa_m X0) (u1_struct_0 \\
& k1_scmfsa_2)) \wedge ((v1_funct_1 (k1_scmfsa_m X0)) \wedge ((v5_funct_1 \\
& (k1_scmfsa_m X0) (k2_memstr_0 np_3 k1_scmfsa_2)) \wedge (v1_partfun1 \\
& (k1_scmfsa_m X0) (u1_struct_0 k1_scmfsa_2))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v5_relat_1 \\
& X0 (u1_compos_1 k1_scmfsa_2)) \wedge ((\neg v1_xboole_0 X0) \wedge ((v1_funct_1 \\
& X0) \wedge ((v1_finset_1 X0) \wedge (v1_afinsq_1 X0)))))) \Rightarrow (\forall X1.(\\
& (v1_relat_1 X1) \wedge ((v4_relat_1 X1 (u1_struct_0 k1_scmfsa_2)) \wedge \\
& ((v1_funct_1 X1) \wedge ((v5_funct_1 X1 (k2_memstr_0 np_3 k1_scmfsa_2)) \wedge \\
& (v1_partfun1 X1 (u1_struct_0 k1_scmfsa_2)))))) \Rightarrow (\forall X2. \\
& ((v1_relat_1 X2) \wedge ((v4_relat_1 X2 k5_numbers) \wedge ((v5_relat_1 X2 \\
& (u1_compos_1 k1_scmfsa_2)) \wedge ((v1_funct_1 X2) \wedge (v1_partfun1 X2 \\
& k5_numbers)))))) \Rightarrow (k1_scmfsa6b X0 X1 X2 = k6_extpro_1 np_3 k1_scmfsa_2 \\
& (k1_funct_4 X2 X0) (k1_scmfsa_m X1)))
\end{aligned} \tag{4}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v5_relat_1 \\
& X0 (u1_compos_1 k1_scmfsa_2)) \wedge ((v1_funct_1 X0) \wedge (v1_partfun1 \\
& X0 k5_numbers)))))) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((v4_relat_1 \\
& X1 (u1_struct_0 k1_scmfsa_2)) \wedge ((v1_funct_1 X1) \wedge ((v5_funct_1 \\
& X1 (k2_memstr_0 np_3 k1_scmfsa_2)) \wedge (v1_partfun1 X1 (u1_struct_0 \\
& k1_scmfsa_2)))))) \Rightarrow (\forall X2.((\neg v1_xboole_0 X2) \wedge ((v1_relat_1 \\
& X2) \wedge ((v4_relat_1 X2 k5_numbers) \wedge ((v5_relat_1 X2 (u1_compos_1 \\
& k1_scmfsa_2)) \wedge ((v1_funct_1 X2) \wedge ((v1_finset_1 X2) \wedge (v1_afinsq_1 \\
& X2)))))) \Rightarrow (r8_pboole (u1_struct_0 k1_scmfsa_2) (k1_scmfsa6b \\
& X2 X1 X0) (k1_scmfsa6b X2 (k1_scmfsa_m X1) X0)))
\end{aligned}$$