

t15_amistd_1
(TMR1xicarJWtcLWhpeLe9Z7gR7hex7T59Gh)

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Let $v1_setfam_1 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_memstr_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_memstr_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_amistd_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_extpro_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. 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 $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v5_amistd_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v6_amistd_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ 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 $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_extpro_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_memstr_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_compos_1 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v5_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (2)$$

Assume the following.

$$\exists X0.(v1_xboole_0 X0) \wedge ((v1_xcmplx_0 X0) \wedge ((v1_xxreal_0 X0) \wedge (v1_xreal_0 X0))) \quad (3)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_setfam_1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\
& ((v2_memstr_0 X1 X0) \wedge ((v3_memstr_0 X1 X0) \wedge (l1_extpro_1 X1 X0)))) \Rightarrow \\
& (\forall X2.((v1_relat_1 X2) \wedge ((v4_relat_1 X2 k5_numbers) \wedge ((\\
& v5_relat_1 X2 (u1_compos_1 X1)) \wedge ((v1_funct_1 X2) \wedge (v1_finset_1 \\
& X2)))))) \Rightarrow ((v5_amistd_1 X2 X0 X1) \Leftrightarrow (\forall X3.((v1_relat_1 X3) \wedge \\
& ((v4_relat_1 X3 (u1_struct_0 X1)) \wedge ((v1_funct_1 X3) \wedge ((v5_funct_1 \\
& X3 (k2_memstr_0 X0 X1)) \wedge (v1_partfun1 X3 (u1_struct_0 X1)))))) \Rightarrow \\
& ((k5_memstr_0 X0 X1 X3 \in k1_relset_1 k5_numbers X2) \Rightarrow (\forall X4. \\
& ((v1_relat_1 X4) \wedge ((v4_relat_1 X4 k5_numbers) \wedge ((v5_relat_1 X4 \\
& (u1_compos_1 X1)) \wedge ((v1_funct_1 X4) \wedge (v1_partfun1 X4 k5_numbers)))))) \Rightarrow \\
& ((r1_tarski X2 X4) \Rightarrow (\forall X5.(m2_subset_1 X5 k1_numbers k5_numbers) \Rightarrow \\
& (k5_memstr_0 X0 X1 (k5_extpro_1 X0 X1 X4 X3 X5) \in k1_relset_1 k5_numbers \\
& X2)))))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\forall X0. \forall X1. (l1_extpro_1 X1 X0) \Rightarrow ((l1_memstr_0 X1 X0) \wedge (l1_compos_1 X1)) \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_setfam_1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\
& ((v2_memstr_0 X1 X0) \wedge ((v3_memstr_0 X1 X0) \wedge (l1_memstr_0 X1 X0)))) \Rightarrow \\
& (\forall X2.(v7_ordinal1 X2) \Rightarrow (\forall X3.((v1_relat_1 X3) \wedge (\\
& (v4_relat_1 X3 (u1_struct_0 X1)) \wedge ((v1_funct_1 X3) \wedge (v5_funct_1 \\
& X3 (k2_memstr_0 X0 X1)))))) \Rightarrow ((v5_memstr_0 X3 X0 X1 X2) \Leftrightarrow ((k4_struct_0 \\
& X1 \in k9_xtuple_0 X3) \wedge (k5_memstr_0 X0 X1 X3 = X2))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_setfam_1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\
& ((v2_memstr_0 X1 X0) \wedge ((v3_memstr_0 X1 X0) \wedge (l1_extpro_1 X1 X0)))) \Rightarrow \\
& (\forall X2.((v1_relat_1 X2) \wedge ((v4_relat_1 X2 k5_numbers) \wedge ((\\
& v5_relat_1 X2 (u1_compos_1 X1)) \wedge (v1_funct_1 X2)))) \Rightarrow ((v6_amistd_1 \\
& X2 X0 X1) \Leftrightarrow (\forall X3.((v1_relat_1 X3) \wedge ((v4_relat_1 X3 (u1_struct_0 \\
& X1)) \wedge ((v1_funct_1 X3) \wedge ((v5_funct_1 X3 (k2_memstr_0 X0 X1)) \wedge (\\
& (v1_partfun1 X3 (u1_struct_0 X1)) \wedge (v5_memstr_0 X3 X0 X1 k6_numbers)))))) \Rightarrow \\
& (\forall X4.((v1_relat_1 X4) \wedge ((v4_relat_1 X4 k5_numbers) \wedge ((\\
& v5_relat_1 X4 (u1_compos_1 X1)) \wedge ((v1_funct_1 X4) \wedge (v1_partfun1 \\
& X4 k5_numbers)))))) \Rightarrow ((r1_tarski X2 X4) \Rightarrow (\forall X5.(m2_subset_1 \\
& X5 k1_numbers k5_numbers) \Rightarrow (k5_memstr_0 X0 X1 (k5_extpro_1 X0 X1 \\
& X4 X3 X5) \in k1_relset_1 k5_numbers X2)))))))))
\end{aligned} \tag{7}$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (v7_ordinal1 X0) \tag{8}$$

Theorem 1

$$\begin{aligned} & \forall X0. (\neg v1_setfam_1 X0) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge \\ & ((v2_memstr_0 X1 X0) \wedge ((v3_memstr_0 X1 X0) \wedge ((v3_amistd_1 X1 X0) \wedge \\ & (l1_extpro_1 X1 X0)))))) \Rightarrow (\forall X2. ((v1_relat_1 X2) \wedge ((v4_relat_1 \\ & X2 k5_numbers) \wedge ((v5_relat_1 X2 (u1_compos_1 X1)) \wedge ((v1_funct_1 \\ & X2) \wedge (v1_finset_1 X2)))))) \Rightarrow (((v5_amistd_1 X2 X0 X1) \wedge (k6_numbers \in \\ & k1_relset_1 k5_numbers X2)) \Rightarrow (v6_amistd_1 X2 X0 X1))) \end{aligned}$$