

t37_memstr_0

(TMS6z9AgWZWdZNPPQuk6UpVMMxhQJfSCWby)

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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 $l1_memstr_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ 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 $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_funct_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v5_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((r1_tarski X0 X1) \Rightarrow (k1_funct_4 X1 X0 = X1))) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_setfam_1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\ & ((v2_memstr_0 X1 X0) \wedge ((v3_memstr_0 X1 X0) \wedge (l1_memstr_0 X1 X0)))) \Rightarrow \\ & (\forall X2.(v7_ordinal1 X2) \Rightarrow (\forall X3.((v1_relat_1 X3) \wedge \\ & (v4_relat_1 X3 (u1_struct_0 X1)) \wedge ((v1_funct_1 X3) \wedge (v5_funct_1 \\ & X3 (k2_memstr_0 X0 X1)))) \Rightarrow ((v5_memstr_0 X3 X0 X1 X2) \Leftrightarrow (r1_tarski \\ & (k7_memstr_0 X0 X1 X2) X3)))) \quad (2) \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \quad (3)$$

Assume the following.

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

Assume the following.

$$(\neg v1_xboole_0 \ k4_ordinal1) \wedge (v3_ordinal1 \ k4_ordinal1) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1_setfam_1 \ X0) \wedge (((\neg v2_struct_0 \\ & X1) \wedge ((v2_memstr_0 \ X1 \ X0) \wedge ((v3_memstr_0 \ X1 \ X0) \wedge (l1_memstr_0 \ X1 \\ & X0)))) \wedge (v7_ordinal1 \ X2))) \Rightarrow ((v1_relat_1 \ (k7_memstr_0 \ X0 \ X1 \ X2)) \wedge \\ & ((v4_relat_1 \ (k7_memstr_0 \ X0 \ X1 \ X2) \ (u1_struct_0 \ X1)) \wedge ((v1_funct_1 \\ & (k7_memstr_0 \ X0 \ X1 \ X2)) \wedge (v5_funct_1 \ (k7_memstr_0 \ X0 \ X1 \ X2) \ (k2_memstr_0 \\ & X0 \ X1)))))) \end{aligned} \quad (6)$$

Assume the following.

$$m1_subset_1 \ k5_numbers \ (k1_zfmisc_1 \ k1_numbers) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1_setfam_1 \ X0) \wedge (((\neg v2_struct_0 \\ & X1) \wedge ((v2_memstr_0 \ X1 \ X0) \wedge ((v3_memstr_0 \ X1 \ X0) \wedge (l1_memstr_0 \ X1 \\ & X0)))) \wedge ((v1_relat_1 \ X2) \wedge ((v4_relat_1 \ X2 \ (u1_struct_0 \ X1)) \wedge \\ & (v1_funct_1 \ X2) \wedge (v5_funct_1 \ X2 \ (k2_memstr_0 \ X0 \ X1)))))) \Rightarrow (m2_subset_1 \\ & (k5_memstr_0 \ X0 \ X1 \ X2) \ k1_numbers \ k5_numbers) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_setfam_1 \ X0) \Rightarrow (\forall X1. ((\neg v2_struct_0 \ X1) \wedge \\ & ((v2_memstr_0 \ X1 \ X0) \wedge ((v3_memstr_0 \ X1 \ X0) \wedge (l1_memstr_0 \ X1 \ X0)))) \Rightarrow \\ & (\forall X2. (v7_ordinal1 \ X2) \Rightarrow (\forall X3. ((v1_relat_1 \ X3) \wedge \\ & (v4_relat_1 \ X3 \ (u1_struct_0 \ X1)) \wedge ((v1_funct_1 \ X3) \wedge (v5_funct_1 \\ & X3 \ (k2_memstr_0 \ X0 \ X1)))) \Rightarrow ((v5_memstr_0 \ X3 \ X0 \ X1 \ X2) \Leftrightarrow ((k4_struct_0 \\ & X1 \in k9_xtuple_0 \ X3) \wedge (k5_memstr_0 \ X0 \ X1 \ X3 = X2)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ k4_ordinal1) \Rightarrow (v7_ordinal1 \ X0) \quad (10)$$

Assume the following.

$$\forall X0. (v1_xboole_0 \ X0) \Rightarrow (\forall X1. (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ X0)) \Rightarrow (v1_xboole_0 \ X1)) \quad (11)$$

Theorem 1

$$\begin{aligned} & \forall X0. (\neg v1_setfam_1 \ X0) \Rightarrow (\forall X1. ((\neg v2_struct_0 \ X1) \wedge \\ & ((v2_memstr_0 \ X1 \ X0) \wedge ((v3_memstr_0 \ X1 \ X0) \wedge (l1_memstr_0 \ X1 \ X0)))) \Rightarrow \\ & (\forall X2. ((v1_relat_1 \ X2) \wedge ((v4_relat_1 \ X2 \ (u1_struct_0 \ X1)) \wedge \\ & ((v1_funct_1 \ X2) \wedge (v5_funct_1 \ X2 \ (k2_memstr_0 \ X0 \ X1)))))) \Rightarrow ((k4_struct_0 \\ & X1 \in k9_xtuple_0 \ X2) \Rightarrow (k1_funct_4 \ X2 \ (k7_memstr_0 \ X0 \ X1 \ (k5_memstr_0 \\ & X0 \ X1 \ X2)) = X2))) \end{aligned}$$