

t19_scmfsa_m (TMdx-
PQrzo7hoTEFZfN2HWkFxMLt3fF4NGkY)

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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 $u1_struct_0 : \iota \Rightarrow \iota$ 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 $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_scmfsa_2 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Let $k6_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_scmfsa_m : \iota \Rightarrow \iota$ be given. 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 $k8_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_extpro_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_extpro_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_compos_1 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_setfam_1 X0) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge \\ & ((v2_memstr_0 X1 X0) \wedge ((v3_memstr_0 X1 X0) \wedge (l1_memstr_0 X1 X0)))) \Rightarrow \\ & (\forall X2. ((v1_relat_1 X2) \wedge ((v4_relat_1 X2 (u1_struct_0 X1)) \wedge \\ & ((v1_funct_1 X2) \wedge (v5_funct_1 X2 (k2_memstr_0 X0 X1)))))) \Rightarrow (k6_memstr_0 \\ & X0 X1 (k8_memstr_0 X0 X1 X2) = k6_memstr_0 X0 X1 X2)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 (u1_struct_0 k1_scmfsa_2)) \wedge \\ & ((v1_funct_1 X0) \wedge ((v5_funct_1 X0 (k2_memstr_0 np_3 k1_scmfsa_2)) \wedge \\ & (v1_partfun1 X0 (u1_struct_0 k1_scmfsa_2)))))) \Rightarrow ((k1_funct_1 \\ & X0 (k4_scmfsa_2 k6_numbers) = np_1) \Rightarrow (k8_memstr_0 np_3 k1_scmfsa_2 \\ & X0 = k1_scmfsa_m X0)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_3) \wedge (m2_subset_1 np_3 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_3 k5_numbers) \wedge (m1_subset_1 np_3 k1_numbers)) \end{aligned} \quad (3)$$

Assume the following.

$$\neg v1_xboole_0 \ np_3 \quad (4)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (5)$$

Assume the following.

$$(v3_memstr_0 \ k1_scmf_sa_2 \ np_3) \wedge (v1_extpro_1 \ k1_scmf_sa_2 \ np_3) \quad (6)$$

Assume the following.

$$\begin{aligned} &(\neg v2_struct_0 \ k1_scmf_sa_2) \wedge ((v2_memstr_0 \ k1_scmf_sa_2 \ np_3) \wedge \\ & \quad (v1_extpro_1 \ k1_scmf_sa_2 \ np_3)) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0. \forall X1. (l1_extpro_1 \ X1 \ X0) \Rightarrow ((l1_memstr_0 \ X1 \ X0) \wedge (l1_compos_1 \ X1)) \quad (8)$$

Assume the following.

$$(v1_extpro_1 \ k1_scmf_sa_2 \ np_3) \wedge (l1_extpro_1 \ k1_scmf_sa_2 \ np_3) \quad (9)$$

Assume the following.

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

Assume the following.

$$\forall X0. ((\neg v1_xboole_0 \ X0) \wedge (v7_ordinal1 \ X0)) \Rightarrow ((\neg v1_xboole_0 \ X0) \wedge ((v7_ordinal1 \ X0) \wedge (\neg v1_setfam_1 \ X0))) \quad (11)$$

Theorem 1

$$\begin{aligned} &\forall X0. ((v1_relat_1 \ X0) \wedge ((v4_relat_1 \ X0 \ (u1_struct_0 \ k1_scmf_sa_2)) \wedge \\ & \quad ((v1_funct_1 \ X0) \wedge ((v5_funct_1 \ X0 \ (k2_memstr_0 \ np_3 \ k1_scmf_sa_2)) \wedge \\ & \quad \quad (v1_partfun1 \ X0 \ (u1_struct_0 \ k1_scmf_sa_2)))))) \Rightarrow ((k1_funct_1 \\ & \quad X0 \ (k4_scmf_sa_2 \ k6_numbers) = np_1) \Rightarrow (k6_memstr_0 \ np_3 \ k1_scmf_sa_2 \\ & \quad \quad (k1_scmf_sa_m \ X0) = k6_memstr_0 \ np_3 \ k1_scmf_sa_2 \ X0)) \end{aligned}$$