

t5_scmpds_2
(TMUPhN6oVJzvtpjNv6xp23mEaz7XXWhSaTs)

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Let $v1_ami_2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_scmpds_2 : \iota$ be given. Let $k4_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k4_numbers : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_ami_2 : \iota$ be given. Let $k2_ami_2 : \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_ami_2 : \iota$ be given. Let $k4_ami_2 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_compos_0 : \iota \Rightarrow o$ be given. Let $v2_compos_0 : \iota \Rightarrow o$ be given. Let $v3_compos_0 : \iota \Rightarrow o$ be given. Let $v5_compos_0 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_card_3 : \iota \Rightarrow \iota$ be given. Let $g1_extpro_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_scmpds_i : \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ 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 $l1_memstr_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_compos_1 : \iota \Rightarrow o$ be given. Let $k6_scmpds_1 : \iota$ be given. Let $k1_funct_7 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_setfam_1 : \iota \Rightarrow o$ be given. Let $k2_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $u2_struct_0 : \iota \Rightarrow \iota$ be given. Let $u1_compos_1 : \iota \Rightarrow \iota$ be given. Let $u1_extpro_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(m2_subset_1 X0 k1_ami_2 k2_ami_2) \Rightarrow (k1_funct_1 (k3_relat_1 k3_ami_2 k4_ami_2) X0 = k4_numbers) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.\neg(X0 \in X1) \wedge (v1_xboole_0 X1) \quad (2)$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (4)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \end{aligned} \quad (5)$$

Assume the following.

$$\neg v1_xboole_0 np_2 \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (7)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (8)$$

Assume the following.

$$\exists X0.(m1_subset_1 X0 (u1_struct_0 k1_scmpds_2)) \wedge (v1_ami_2 X0) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & \forall X6.((m1_subset_1 X2 X1) \wedge (((v1_compos_0 X3) \wedge ((v2_compos_0 \\ & X3) \wedge ((v3_compos_0 X3) \wedge (v5_compos_0 X3)))) \wedge (((v1_funct_1 X4) \wedge \\ & ((v1_funct_2 X4 X1 X0) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X1 X0)))))) \wedge (((v1_relat_1 X5) \wedge ((v4_relat_1 X5 X0) \wedge ((v1_funct_1 \\ & X5) \wedge (v1_partfun1 X5 X0)))) \wedge ((v1_funct_1 X6) \wedge ((v1_funct_2 X6 \\ & X3 (k1_funct_2 (k4_card_3 (k3_relat_1 X4 X5)) (k4_card_3 (k3_relat_1 \\ & X4 X5)))) \wedge (m1_subset_1 X6 (k1_zfmisc_1 (k2_zfmisc_1 X3 (k1_funct_2 \\ & (k4_card_3 (k3_relat_1 X4 X5)) (k4_card_3 (k3_relat_1 X4 X5)))))))))) \Rightarrow \\ & (\forall X7.\forall X8.\forall X9.\forall X10.\forall X11.\forall X12. \\ & \forall X13.(g1_extpro_1 X0 X1 X2 X3 X4 X5 X6 = g1_extpro_1 X7 X8 X9 \\ & X10 X11 X12 X13) \Rightarrow ((X0 = X7) \wedge ((X1 = X8) \wedge ((X2 = X9) \wedge ((X3 = X10) \wedge ((X4 = \\ & X11) \wedge ((X5 = X12) \wedge (X6 = X13)))))))))) \end{aligned} \quad (10)$$

Assume the following.

$$v5_compos_0 k1_scmpds_i \quad (11)$$

Assume the following.

$$v3_compos_0 k1_scmpds_i \quad (12)$$

Assume the following.

$$v2_compos_0 k1_scmpds_i \quad (13)$$

Assume the following.

$$v1_compos_0 \ k1_scmpds_i \quad (14)$$

Assume the following.

$$(\neg v2_struct_0 \ k1_scmpds_2) \wedge (v1_extpro_1 \ k1_scmpds_2 \ np_2) \quad (15)$$

Assume the following.

$$\forall X0. \forall X1. (l1_extpro_1 \ X1 \ X0) \Rightarrow ((l1_memstr_0 \ X1 \ X0) \wedge (l1_compos_1 \ X1)) \quad (16)$$

Assume the following.

$$\begin{aligned} & (v1_funct_1 \ k6_scmpds_1) \wedge ((v1_funct_2 \ k6_scmpds_1 \ k1_scmpds_i \\ & (k1_funct_2 \ (k4_card_3 \ (k3_relat_1 \ k3_ami_2 \ k4_ami_2)) \ (k4_card_3 \\ & (k3_relat_1 \ k3_ami_2 \ k4_ami_2)))) \wedge (m1_subset_1 \ k6_scmpds_1 \\ & (k1_zfmisc_1 \ (k2_zfmisc_1 \ k1_scmpds_i \ (k1_funct_2 \ (k4_card_3 \\ & (k3_relat_1 \ k3_ami_2 \ k4_ami_2)) \ (k4_card_3 \ (k3_relat_1 \ k3_ami_2 \\ & k4_ami_2)))))) \end{aligned} \quad (17)$$

Assume the following.

$$(v1_relat_1 \ k4_ami_2) \wedge ((v4_relat_1 \ k4_ami_2 \ np_2) \wedge ((v1_funct_1 \ k4_ami_2) \wedge (v1_partfun1 \ k4_ami_2 \ np_2))) \quad (18)$$

Assume the following.

$$(v1_funct_1 \ k3_ami_2) \wedge ((v1_funct_2 \ k3_ami_2 \ k1_ami_2 \ np_2) \wedge (m1_subset_1 \ k3_ami_2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k1_ami_2 \ np_2)))) \quad (19)$$

Assume the following.

$$m1_subset_1 \ k2_ami_2 \ (k1_zfmisc_1 \ k1_ami_2) \quad (20)$$

Assume the following.

$$(v1_extpro_1 \ k1_scmpds_2 \ np_2) \wedge (l1_extpro_1 \ k1_scmpds_2 \ np_2) \quad (21)$$

Assume the following.

$$\forall X0. \forall X1. m1_subset_1 \ (k1_funct_7 \ X0 \ X1) \ X1 \quad (22)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_setfam_1 \ X0) \Rightarrow (\forall X1. ((\neg v2_struct_0 \ X1) \wedge \\ & (l1_memstr_0 \ X1 \ X0)) \Rightarrow (\forall X2. (m1_subset_1 \ X2 \ (u1_struct_0 \\ & X1)) \Rightarrow (k4_memstr_0 \ X0 \ X1 \ X2 = k1_funct_1 \ (k2_memstr_0 \ X0 \ X1) \ X2))) \end{aligned} \quad (23)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_setfam_1 X0) \Rightarrow (\forall X1.(l1_memstr_0 X1 X0) \Rightarrow \\ (k2_memstr_0 X0 X1 = k3_relat_1 (u1_memstr_0 X0 X1) (u2_memstr_0 \\ X0 X1))) \end{aligned} \quad (24)$$

Assume the following.

$$\begin{aligned} k1_scmpds_2 = g1_extpro_1 np_2 k1_ami_2 (k1_funct_7 k5_numbers \\ k1_ami_2) k1_scmpds_i k3_ami_2 k4_ami_2 k6_scmpds_1 \end{aligned} \quad (25)$$

Assume the following.

$$\forall X0.(v1_ami_2 X0) \Leftrightarrow (X0 \in k2_ami_2) \quad (26)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (27)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0) \wedge (v7_ordinal1 X0)) \Rightarrow ((\neg v1_xboole_0 \\ X0) \wedge ((v7_ordinal1 X0) \wedge (\neg v1_setfam_1 X0))) \quad (28)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(l1_extpro_1 X1 X0) \Rightarrow ((v1_extpro_1 X1 X0) \Rightarrow \\ (X1 = g1_extpro_1 X0 (u1_struct_0 X1) (u2_struct_0 X1) (u1_compos_1 \\ X1) (u1_memstr_0 X0 X1) (u2_memstr_0 X0 X1) (u1_extpro_1 X0 X1))) \end{aligned} \quad (29)$$

Theorem 1

$$\forall X0.((v1_ami_2 X0) \wedge (m1_subset_1 X0 (u1_struct_0 k1_scmpds_2))) \Rightarrow \\ (k4_memstr_0 np_2 k1_scmpds_2 X0 = k4_numbers)$$