

t2_scm_1 (TM- SXJqH6sJhWUZrdBBmgiVpew3XAQiYDeAG)

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Let $v1_int_1 : \iota \Rightarrow o$ 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 $v5_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_2 : \iota$ be given. Let $k1_ami_3 : \iota$ be given. Let $m1_scm_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_afinsq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_ami_3 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v5_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $k1_afinsq_1 : \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_0 : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_numbers : \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1_relat_1 X2) \wedge ((v5_ordinal1 \\ & X2) \wedge ((v1_funct_1 X2) \wedge (v1_finset_1 X2)))) \Rightarrow ((X2 = k6_afinsq_1 \\ X0 X1) \Leftrightarrow ((k1_afinsq_1 X2 = np_2) \wedge ((k1_funct_1 X2 k6_numbers = X0) \wedge \\ & (k1_funct_1 X2 np_1 = X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (3)$$

Assume the following.

$$(m2_subset_1 np_0 k1_numbers k5_numbers) \wedge ((m1_subset_1 np_0 k5_numbers) \wedge (m1_subset_1 np_0 k1_numbers)) \quad (4)$$

Assume the following.

$$v1_xboole_0 np_0 \quad (5)$$

Assume the following.

$$\neg r1_xreal_0 \ np_2 \ np_1 \tag{6}$$

Assume the following.

$$\neg r1_xreal_0 \ np_2 \ np_0 \tag{7}$$

Assume the following.

$$k6_numbers = k1_xboole_0 \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 (k6_afinsq_1 X0 X1)) \wedge (v1_funct_1 (k6_afinsq_1 X0 X1)) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.((v1_int_1 X0) \wedge (v1_int_1 X1)) \Rightarrow (v5_relat_1 (k6_afinsq_1 X0 X1) \ k4_numbers) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.(v5_ordinal1 (k6_afinsq_1 X0 X1)) \wedge (v1_finset_1 (k6_afinsq_1 X0 X1)) \tag{11}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v5_relat_1 X0 \ k4_numbers) \wedge ((v1_funct_1 X0) \wedge ((v5_ordinal1 X0) \wedge (v1_finset_1 X0)))))) \Rightarrow (\forall X1.(m1_scm_1 X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge ((v4_relat_1 X1 (u1_struct_0 \ k1_ami_3)) \wedge ((v1_funct_1 X1) \wedge ((v5_funct_1 X1 (k2_memstr_0 \ np_2 \ k1_ami_3)) \wedge (v1_partfun1 X1 (u1_struct_0 \ k1_ami_3))))))) \end{aligned} \tag{12}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v5_relat_1 X0 \ k4_numbers) \wedge ((v1_funct_1 X0) \wedge ((v5_ordinal1 X0) \wedge (v1_finset_1 X0)))))) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((v4_relat_1 X1 (u1_struct_0 \ k1_ami_3)) \wedge ((v1_funct_1 X1) \wedge ((v5_funct_1 X1 (k2_memstr_0 \ np_2 \ k1_ami_3)) \wedge (v1_partfun1 X1 (u1_struct_0 \ k1_ami_3))))))) \Rightarrow ((m1_scm_1 X1 X0) \Leftrightarrow (\forall X2.(m2_subset_1 X2 \ k1_numbers \ k5_numbers) \Rightarrow ((\neg r1_xreal_0 (k1_afinsq_1 X0) X2) \Rightarrow (k1_funct_1 X1 (k10_ami_3 X2) = k1_funct_1 X0 X2)))))) \end{aligned} \tag{13}$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_int_1 X0) \Rightarrow (\forall X1.(v1_int_1 X1) \Rightarrow (\forall X2. \\ & (m2_subset_1 X2 \ k1_numbers \ k5_numbers) \Rightarrow (\forall X3.((v5_memstr_0 X3 \ np_2 \ k1_ami_3 X2) \wedge (m1_scm_1 X3 (k6_afinsq_1 X0 X1)) \Rightarrow ((k1_funct_1 X3 (k10_ami_3 \ k6_numbers) = X0) \wedge (k1_funct_1 X3 (k10_ami_3 \ np_1) = X1)))))) \end{aligned}$$