

t10_scmfsa8a (TMLCvAu- JFX6CTECipxb9o6dvumUXByzFmPE)

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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 $k5_numbers : \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_compos_1 : \iota \Rightarrow \iota$ be given. Let $k1_scmfsa_2 : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_scmfsa7b : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k6_compos_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. 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 $r4_scmfsa7b : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ 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 $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k4_scmfsa_2 : \iota \Rightarrow \iota$ be given. Let $v1_extpro_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_3 : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v5_relat_1 \\ & X0 (u1_compos_1 k1_scmfsa_2)) \wedge ((v1_funct_1 X0) \wedge (v1_finset_1 \\ & X0)))))) \Rightarrow (\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow \\ & (\forall X2.((v1_ami_2 X2) \wedge (m1_subset_1 X2 (u1_struct_0 k1_scmfsa_2))) \Rightarrow \\ & (\neg(\neg r4_scmfsa7b X0 X2) \wedge (r4_scmfsa7b (k6_compos_1 k1_scmfsa_2 \\ & X0 X1) X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$m1_subset_1 k1_xboole_0 k4_ordinal1 \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \tag{3}$$

Assume the following.

$$k6_numbers = k1_xboole_0 \tag{4}$$

Assume the following.

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

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \quad (6)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (7)$$

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.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((l1_compos_1 X0) \wedge ((v1_relat_1 \\ & X1) \wedge ((v4_relat_1 X1 k5_numbers) \wedge ((v5_relat_1 X1 (u1_compos_1 \\ & X0)) \wedge ((v1_funct_1 X1) \wedge (v1_finset_1 X1)))))) \wedge (v7_ordinal1 X2)) \Rightarrow \\ & ((v1_relat_1 (k6_compos_1 X0 X1 X2)) \wedge ((v4_relat_1 (k6_compos_1 \\ & X0 X1 X2) k5_numbers) \wedge ((v5_relat_1 (k6_compos_1 X0 X1 X2) (u1_compos_1 \\ & X0)) \wedge ((v1_funct_1 (k6_compos_1 X0 X1 X2)) \wedge (v1_finset_1 (k6_compos_1 \\ & X0 X1 X2)))))) \end{aligned} \quad (9)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (10)$$

Assume the following.

$$\forall X0. (v7_ordinal1 X0) \Rightarrow ((v1_ami_2 (k4_scmfsa_2 X0)) \wedge (m1_subset_1 (k4_scmfsa_2 X0) (u1_struct_0 k1_scmfsa_2))) \quad (11)$$

Assume the following.

$$(v1_extpro_1 k1_scmfsa_2 np_3) \wedge (l1_extpro_1 k1_scmfsa_2 np_3) \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v5_relat_1 \\ & X0 (u1_compos_1 k1_scmfsa_2)) \wedge (v1_funct_1 X0)))) \Rightarrow ((v1_scmfsa7b \\ & X0) \Leftrightarrow (\neg r4_scmfsa7b X0 (k4_scmfsa_2 k6_numbers))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (14)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v5_relat_1 \\ & X0 (u1_compos_1 k1_scmfsa_2)) \wedge ((v1_funct_1 X0) \wedge ((v1_finset_1 \\ & X0) \wedge (v1_scmfsa7b X0)))))) \Rightarrow (\forall X1. (m2_subset_1 X1 k1_numbers \\ & k5_numbers) \Rightarrow (v1_scmfsa7b (k6_compos_1 k1_scmfsa_2 X0 X1))) \end{aligned}$$