

t31_scmfsa6a (TMUqZGy-
wmqBrQTvo9MbBewF1aAUN23KQZ5k)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_compos_1 : \iota \Rightarrow \iota$ be given. Let $k1_scmfsa_2 : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ 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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_afinsq_1 : \iota \Rightarrow o$ be given. Let $k3_scmfsa6a : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_scmfsa6a : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_scmfsa6a : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_compos_1 : \iota \Rightarrow o$ be given. Let $k11_compos_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v1_extpro_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_3 : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_compos_1 k1_scmfsa_2)) \Rightarrow (\forall X1. \\ & ((v1_relat_1 X1) \wedge ((v4_relat_1 X1 k5_numbers) \wedge ((v5_relat_1 X1 \\ & (u1_compos_1 k1_scmfsa_2)) \wedge ((\neg v1_xboole_0 X1) \wedge ((v1_funct_1 \\ & X1) \wedge ((v1_finset_1 X1) \wedge (v1_afinsq_1 X1))))))) \Rightarrow (\forall X2.(\\ & (v1_relat_1 X2) \wedge ((v4_relat_1 X2 k5_numbers) \wedge ((v5_relat_1 X2 \\ & (u1_compos_1 k1_scmfsa_2)) \wedge ((\neg v1_xboole_0 X2) \wedge ((v1_funct_1 \\ & X2) \wedge ((v1_finset_1 X2) \wedge (v1_afinsq_1 X2))))))) \Rightarrow (k3_scmfsa6a \\ & (k4_scmfsa6a X0 X1) X2 = k4_scmfsa6a X0 (k3_scmfsa6a X1 X2))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((l1_compos_1 X0) \wedge (m1_subset_1 X1 (u1_compos_1 \\ & X0))) \Rightarrow ((\neg v1_xboole_0 (k11_compos_1 X0 X1)) \wedge ((v1_relat_1 (k11_compos_1 \\ & X0 X1)) \wedge ((v4_relat_1 (k11_compos_1 X0 X1) k5_numbers) \wedge ((v5_relat_1 \\ & (k11_compos_1 X0 X1) (u1_compos_1 X0)) \wedge ((v1_funct_1 (k11_compos_1 \\ & X0 X1)) \wedge ((v1_finset_1 (k11_compos_1 X0 X1)) \wedge (v1_afinsq_1 (k11_compos_1 \\ & X0 X1)))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(l1_extpro_1 X1 X0) \Rightarrow ((l1_memstr_0 X1 X0) \wedge \\ & (l1_compos_1 X1)) \end{aligned} \quad (3)$$

Assume the following.

$$(v1_extpro_1 \ k1_scmfsa_2 \ np_3) \wedge (l1_extpro_1 \ k1_scmfsa_2 \ np_3) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 \ X0 \ (u1_compos_1 \ k1_scmfsa_2)) \Rightarrow (\forall X1. \\ & (m1_subset_1 \ X1 \ (u1_compos_1 \ k1_scmfsa_2)) \Rightarrow (k6_scmfsa6a \ X0 \ X1 = \\ & k3_scmfsa6a \ (k11_compos_1 \ k1_scmfsa_2 \ X0) \ (k11_compos_1 \ k1_scmfsa_2 \\ & \quad X1))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 \ X0 \ (u1_compos_1 \ k1_scmfsa_2)) \Rightarrow (\forall X1. \\ & ((v1_relat_1 \ X1) \wedge ((v4_relat_1 \ X1 \ k5_numbers) \wedge ((v5_relat_1 \ X1 \\ & (u1_compos_1 \ k1_scmfsa_2)) \wedge ((\neg v1_xboole_0 \ X1) \wedge ((v1_funct_1 \\ & X1) \wedge ((v1_finset_1 \ X1) \wedge (v1_afinsq_1 \ X1))))))) \Rightarrow (k4_scmfsa6a \\ & \quad X0 \ X1 = k3_scmfsa6a \ (k11_compos_1 \ k1_scmfsa_2 \ X0) \ X1)) \end{aligned} \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 \ X0 \ (u1_compos_1 \ k1_scmfsa_2)) \Rightarrow (\forall X1. \\ & (m1_subset_1 \ X1 \ (u1_compos_1 \ k1_scmfsa_2)) \Rightarrow (\forall X2. ((v1_relat_1 \\ & X2) \wedge ((v4_relat_1 \ X2 \ k5_numbers) \wedge ((v5_relat_1 \ X2 \ (u1_compos_1 \\ & k1_scmfsa_2)) \wedge ((\neg v1_xboole_0 \ X2) \wedge ((v1_funct_1 \ X2) \wedge ((v1_finset_1 \\ & X2) \wedge (v1_afinsq_1 \ X2))))))) \Rightarrow (k3_scmfsa6a \ (k6_scmfsa6a \ X0 \ X1) \\ & \quad X2 = k4_scmfsa6a \ X0 \ (k4_scmfsa6a \ X1 \ X2)))) \end{aligned}$$