

l12_scpisort

(TMF4UAUnjFWDecrHHeGnNwGJtKFXtNntidP)

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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 $v1_int_1 : \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_compos_1 : \iota \Rightarrow \iota$ 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 $k5_card_1 : \iota \Rightarrow \iota$ be given. Let $k10_compos_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_scmpds_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_4 : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_ami_2 X0) \wedge (m1_subset_1 X0 (u1_struct_0 k1_scmpds_2))) \Rightarrow \\ & (\forall X1. (v1_int_1 X1) \Rightarrow (\forall X2. (m2_subset_1 X2 k1_numbers \\ & k5_numbers) \Rightarrow (\forall X3. ((\neg v1_xboole_0 X3) \wedge ((v1_relat_1 X3) \wedge \\ & ((v4_relat_1 X3 k5_numbers) \wedge ((v5_relat_1 X3 (u1_compos_1 k1_scmpds_2)) \wedge \\ & ((v1_funct_1 X3) \wedge ((v1_finset_1 X3) \wedge (v1_afinsq_1 X3)))))) \Rightarrow \\ & (k5_card_1 (k10_compos_1 k1_scmpds_2 (k2_scmpds_7 X0 X1 X2 X3)) = \\ & k2_nat_1 (k5_card_1 X3) np_4)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (3)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_relat_1 X1) \wedge (v4_relat_1 \\ & X1 X0)) \Rightarrow ((v1_xboole_0 X1) \wedge ((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)))) \end{aligned} \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_ami_2 X0) \wedge (m1_subset_1 X0 (u1_struct_0 k1_scmpds_2))) \Rightarrow \\ & \quad (\forall X1.(v1_int_1 X1) \Rightarrow (\forall X2.(m1_subset_1 X2 k5_numbers) \Rightarrow \\ & \quad (\forall X3.((\neg v1_xboole_0 X3) \wedge ((v1_relat_1 X3) \wedge ((v4_relat_1 \\ & \quad X3 k5_numbers) \wedge ((v5_relat_1 X3 (u1_compos_1 k1_scmpds_2)) \wedge \\ & \quad (v1_funct_1 X3) \wedge ((v1_finset_1 X3) \wedge (v1_afinsq_1 X3))))))) \Rightarrow (\\ & \quad k5_card_1 (k10_compos_1 k1_scmpds_2 (k2_scmpds_7 X0 X1 X2 X3)) = \\ & \quad k2_nat_1 (k5_card_1 X3) np_4))) \end{aligned}$$