

t4_scpqsort
(TMb8Se9jwT2RAgqC1WngdZ2giFsETxm33Kj)

October 27, 2020

Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_compos_1 : \iota \Rightarrow \iota$ be given. Let $k1_scmpds_2 : \iota$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Let $k3_scmpds_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_scmpds_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_4 : \iota$ be given. Let $np_2 : \iota$ 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 $k5_numbers : \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $np_3 : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_compos_1 k1_scmpds_2)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_compos_1 k1_scmpds_2)) \Rightarrow (k5_card_1 (k4_scmpds_4 \\ & X0 X1) = np_2)) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_compos_1 k1_scmpds_2)) \Rightarrow (\forall X1. \\ & ((\neg v1_xboole_0 X1) \wedge ((v1_relat_1 X1) \wedge ((v4_relat_1 X1 k5_numbers) \wedge \\ & ((v5_relat_1 X1 (u1_compos_1 k1_scmpds_2)) \wedge ((v1_funct_1 X1) \wedge \\ & ((v1_finset_1 X1) \wedge (v1_afinsq_1 X1))))))) \Rightarrow (k5_card_1 (k3_scmpds_4 \\ & X1 X0) = k2_nat_1 (k5_card_1 X1) np_1)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_3) \wedge (m2_subset_1 np_3 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_3 k5_numbers) \wedge (m1_subset_1 np_3 k1_numbers)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & ((v2_xreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (5)$$

Assume the following.

$$k2_xcmplx_0 \ np_3 \ np_1 = np_4 \quad (6)$$

Assume the following.

$$k2_xcmplx_0 \ np_2 \ np_1 = np_3 \quad (7)$$

Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. ((m1_subset_1 \ X0 \ k5_numbers) \wedge (v7_ordinal1 \ X1)) \Rightarrow (k2_nat_1 \ X0 \ X1 = k2_xcmplx_0 \ X0 \ X1) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((m1_subset_1 \ X0 \ (u1_compos_1 \ k1_scmpds_2)) \wedge \\ & (m1_subset_1 \ X1 \ (u1_compos_1 \ k1_scmpds_2))) \Rightarrow ((\neg v1_xboole_0 \\ & (k4_scmpds_4 \ X0 \ X1)) \wedge ((v1_relat_1 \ (k4_scmpds_4 \ X0 \ X1)) \wedge ((v4_relat_1 \\ & (k4_scmpds_4 \ X0 \ X1) \ k5_numbers) \wedge ((v5_relat_1 \ (k4_scmpds_4 \ X0 \\ & X1) \ (u1_compos_1 \ k1_scmpds_2)) \wedge ((v1_funct_1 \ (k4_scmpds_4 \ X0 \\ & X1)) \wedge ((v1_finset_1 \ (k4_scmpds_4 \ X0 \ X1)) \wedge (v1_afinsq_1 \ (k4_scmpds_4 \\ & X0 \ X1)))))))))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v1_xboole_0 \ X0) \wedge ((v1_relat_1 \ X0) \wedge \\ & ((v4_relat_1 \ X0 \ k5_numbers) \wedge ((v5_relat_1 \ X0 \ (u1_compos_1 \ k1_scmpds_2)) \wedge \\ & ((v1_funct_1 \ X0) \wedge ((v1_finset_1 \ X0) \wedge (v1_afinsq_1 \ X0)))))))) \wedge \\ & (m1_subset_1 \ X1 \ (u1_compos_1 \ k1_scmpds_2))) \Rightarrow ((\neg v1_xboole_0 \\ & (k3_scmpds_4 \ X0 \ X1)) \wedge ((v1_relat_1 \ (k3_scmpds_4 \ X0 \ X1)) \wedge ((v4_relat_1 \\ & (k3_scmpds_4 \ X0 \ X1) \ k5_numbers) \wedge ((v5_relat_1 \ (k3_scmpds_4 \ X0 \\ & X1) \ (u1_compos_1 \ k1_scmpds_2)) \wedge ((v1_funct_1 \ (k3_scmpds_4 \ X0 \\ & X1)) \wedge ((v1_finset_1 \ (k3_scmpds_4 \ X0 \ X1)) \wedge (v1_afinsq_1 \ (k3_scmpds_4 \\ & X0 \ X1)))))))))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ k4_ordinal1) \Rightarrow (v7_ordinal1 \ X0) \quad (12)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_compos_1 k1_scmpds_2)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_compos_1 k1_scmpds_2)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_compos_1 k1_scmpds_2)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_compos_1 \\ & k1_scmpds_2)) \Rightarrow (k5_card_1 (k3_scmpds_4 (k3_scmpds_4 (k4_scmpds_4 \\ & X0 X1) X2) X3) = np_4)))) \end{aligned}$$