

t8_compos_0
(TMVhTMu9K5YLw2mHoKm5Tf5cVWLwhZGwYrm)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_compos_0 : \iota \Rightarrow o$ be given. Let $v2_compos_0 : \iota \Rightarrow o$ be given. Let $v3_compos_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k5_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_card_3 : \iota \Rightarrow \iota$ be given. Let $k3_compos_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_compos_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k4_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((X0 \in k9_xtuple_0 X1) \Rightarrow (k1_funct_1 X1 X0 \in k10_xtuple_0 X1)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski (k1_tarski X0) X1) \Leftrightarrow (X0 \in X1) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1_tarski X0 X1) \wedge (r1_tarski X1 X2)) \Rightarrow (r1_tarski X0 X2) \quad (3)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (k4_finseq_1 X0 = k9_xtuple_0 X0) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (((\neg v1_xboole_0 X0) \wedge (v1_compos_0 X0)) \wedge (m1_subset_1 X1 X0)) \Rightarrow (k2_compos_0 X0 X1 = k4_xtuple_0 X1) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge ((v1_compos_0 X0) \wedge (v2_compos_0 \\ X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (\forall X2.(X2 \in k4_finseq_1 \\ (k5_xtuple_0 X1)) \Rightarrow (r1_tarski (k1_funct_1 (k10_card_3 (k3_compos_0 \\ X0 (k2_compos_0 X0 X1))) X2) k5_numbers))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (((v5_relat_1 X1 X0) \wedge (v1_finseq_1 X1)) \Rightarrow (m2_finseq_1 X1 X0)) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge ((v1_compos_0 X0) \wedge (v2_compos_0 \\ X0))) \Rightarrow ((v3_compos_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (\forall X2. \\ (X2 \in k4_finseq_1 (k5_xtuple_0 X1)) \Rightarrow (r1_tarski k5_numbers (k1_funct_1 \\ (k10_card_3 (k3_compos_0 X0 (k2_compos_0 X0 X1))) X2)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v1_xboole_0 X0) \wedge (v1_compos_0 X0)) \wedge (m1_subset_1 X1 X0)) \Rightarrow (v1_finseq_1 (k5_xtuple_0 X1)) \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((\neg v1_xboole_0 X0) \wedge (v1_compos_0 X0)) \wedge \\ (m1_subset_1 X1 X0)) \Rightarrow ((v1_relat_1 (k5_xtuple_0 X1)) \wedge ((v5_relat_1 \\ (k5_xtuple_0 X1) k5_numbers) \wedge (v1_funct_1 (k5_xtuple_0 X1)))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Rightarrow ((v1_funct_1 X1) \wedge ((v1_finseq_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))))) \quad (11)$$

Assume the following.

$$\forall X0.k4_xtuple_0 X0 = k1_xtuple_0 (k1_xtuple_0 X0) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 X1) \Rightarrow ((v5_relat_1 X1 X0) \Leftrightarrow (r1_tarski (k10_xtuple_0 X1) X0)) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1) \Leftrightarrow ((r1_tarski X0 X1) \wedge (r1_tarski X1 X0)) \quad (14)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge ((v1_compos_0 X0) \wedge ((v2_compos_0 \\ X0) \wedge (v3_compos_0 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (\forall X2. \\ (X2 \in k4_finseq_1 (k5_xtuple_0 X1)) \Rightarrow (k1_funct_1 (k5_xtuple_0 \\ X1) X2 \in k1_funct_1 (k10_card_3 (k3_compos_0 X0 (k2_compos_0 X0 \\ X1))) X2))) \end{aligned}$$