

t43_trees_9 (TMcszKznKVjR- WrgmZPHWG8kG3RB7H2syDFc)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_trees_1 : \iota \Rightarrow o$ be given. Let $m1_trees_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $k1_trees_1 : \iota \Rightarrow \iota$ be given. Let $m1_trees_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $r3_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_2 : \iota \Rightarrow \iota$ be given. Let $k8_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ (\forall X1. ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \Rightarrow \\ (\forall X2. ((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge (v1_finseq_1 X2))) \Rightarrow \\ (((X1 \in k1_trees_1 X0) \wedge (X2 \in k1_trees_1 X0)) \Rightarrow (r3_xboole_0 X1 X2)))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (r3_xboole_0 X0 X1) \Rightarrow (r3_xboole_0 X1 X0) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (5)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0) \wedge (v1_trees_1 X0)) \Rightarrow (\forall X1. (m1_trees_1 X1 X0) \Leftrightarrow (m1_subset_1 X1 X0)) \quad (6)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (7)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (v1_finset_1 (k1_trees_1 X0)) \quad (8)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Rightarrow ((v1_funct_1 X1) \wedge (v1_finseq_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))) \quad (9)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0) \wedge (v1_trees_1 X0)) \Rightarrow (\forall X1. (m1_trees_1 X1 X0) \Rightarrow (m2_finseq_1 X1 k5_numbers)) \quad (10)$$

Assume the following.

$$\forall X0. \forall X1. (m1_finseq_1 X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge (v1_funct_1 X1) \wedge (v1_finseq_1 X1)) \quad (11)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0) \wedge (v1_trees_1 X0)) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow ((m1_trees_2 X1 X0) \Leftrightarrow (\forall X2. (m2_finseq_1 X2 k5_numbers) \Rightarrow (\forall X3. (m2_finseq_1 X3 k5_numbers) \Rightarrow (((X2 \in X1) \wedge (X3 \in X1)) \Rightarrow (r3_xboole_0 X2 X3)))))) \quad (12)$$

Assume the following.

$$\forall X0. (v1_trees_1 X0) \Leftrightarrow ((r1_tarski X0 (k3_finseq_2 k5_numbers)) \wedge ((\forall X1. (m2_finseq_1 X1 k5_numbers) \Rightarrow ((X1 \in X0) \Rightarrow (r1_tarski (k1_trees_1 X1) X0))) \wedge (\forall X1. (m2_finseq_1 X1 k5_numbers) \Rightarrow (\forall X2. (m1_subset_1 X2 k5_numbers) \Rightarrow (\forall X3. (m1_subset_1 X3 k5_numbers) \Rightarrow (((k8_finseq_1 k5_numbers X1 (k12_finseq_1 k5_numbers X2) \in X0) \wedge (r1_xxreal_0 X3 X2)) \Rightarrow (k8_finseq_1 k5_numbers X1 (k12_finseq_1 k5_numbers X3) \in X0))))))) \quad (13)$$

Theorem 1

$$\forall X0.((\neg v1_xboole_0 X0) \wedge (v1_trees_1 X0)) \Rightarrow (\forall X1. (m1_trees_1 X1 X0) \Rightarrow ((v1_finset_1 (k1_trees_1 X1)) \wedge (m1_trees_2 (k1_trees_1 X1) X0)))$$