

t62_trees_3

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_trees_1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_trees_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k12_trees_3 : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ 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 $k7_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_finseq_1 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k5_finseq_1 : \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0) \wedge (v1_trees_1 X0)) \Rightarrow (\forall X1. \\ & (X1 \in k12_trees_3 X0) \Leftrightarrow (\neg (X1 \neq k1_xboole_0) \wedge (\forall X2. ((v1_relat_1 \\ & X2) \wedge ((v1_funct_1 X2) \wedge (v1_finseq_1 X2))) \Rightarrow (\neg (X2 \in X0) \wedge (X1 = k7_finseq_1 \\ & (k12_finseq_1 k5_numbers k6_numbers) X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$k2_trees_1 np_1 = k2_tarski k1_xboole_0 (k12_finseq_1 k5_numbers k6_numbers) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ & ((k7_finseq_1 X0 k1_xboole_0 = X0) \wedge (k7_finseq_1 k1_xboole_0 X0 = X0)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0) \wedge (v1_trees_1 X0)) \Rightarrow ((k1_xboole_0 \in X0) \wedge (k6_finseq_1 k5_numbers \in X0)) \quad (5)$$

Assume the following.

$$m1_subset_1 \ k1_xboole_0 \ k4_ordinal1 \quad (6)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (7)$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 \ X0) \wedge (m1_subset_1 \ X1 \ X0)) \Rightarrow (k12_finseq_1 \ X0 \ X1 = k5_finseq_1 \ X1) \quad (9)$$

Assume the following.

$$\forall X0.\exists X1.(m1_finseq_1 \ X1 \ X0) \wedge ((v1_relat_1 \ X1) \wedge ((v4_relat_1 \ X1 \ k5_numbers) \wedge ((v5_relat_1 \ X1 \ X0) \wedge ((v1_funct_1 \ X1) \wedge ((v1_xboole_0 \ X1) \wedge ((v1_finset_1 \ X1) \wedge (v1_finseq_1 \ X1))))))) \quad (10)$$

Assume the following.

$$\forall X0.v1_finseq_1 \ (k5_finseq_1 \ X0) \quad (11)$$

Assume the following.

$$(\neg v1_xboole_0 \ k4_ordinal1) \wedge (v3_ordinal1 \ k4_ordinal1) \quad (12)$$

Assume the following.

$$\forall X0.(v1_relat_1 \ (k5_finseq_1 \ X0)) \wedge (v1_funct_1 \ (k5_finseq_1 \ X0)) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski \ X0 \ X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2_tarski \ X0 \ X1) \Leftrightarrow (\forall X3.(X3 \in X2) \Leftrightarrow ((X3 = X0) \vee (X3 = X1))) \quad (15)$$

Theorem 1

$$\forall X0.((\neg v1_xboole_0 \ X0) \wedge (v1_trees_1 \ X0)) \Rightarrow (r1_tarski \ (k2_trees_1 \ np_1) \ (k12_trees_3 \ X0))$$