

t41_trees_3

(TMFX5xyC24vkTw4fz8wQWZP2sHUazVmfndt)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_trees_1 : \iota \Rightarrow o$ be given. Let $m4_trees_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_trees_1 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $m3_trees_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_trees_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_trees_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \neg (X0 \in X1) \wedge (v1_xboole_0 X1) \tag{1}$$

Assume the following.

$$\forall X0. r1_tarski k1_xboole_0 X0 \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \tag{3}$$

Assume the following.

$$k2_trees_1 k6_numbers = k1_tarski k1_xboole_0 \tag{4}$$

Assume the following.

$$\forall X0. ((\neg v1_xboole_0 X0) \wedge ((v1_finset_1 X0) \wedge (v1_trees_1 X0))) \Rightarrow (\forall X1. (m3_trees_3 X1 X0) \Leftrightarrow (m2_trees_1 X1 X0)) \tag{5}$$

Assume the following.

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

Assume the following.

$$k6_numbers = k1_xboole_0 \tag{7}$$

Assume the following.

$$\forall X0. \neg v1_xboole_0 (k1_tarSKI X0) \quad (8)$$

Assume the following.

$$v1_trees_1 (k1_tarSKI k1_xboole_0) \quad (9)$$

Assume the following.

$$\forall X0. v1_finset_1 (k1_tarSKI X0) \quad (10)$$

Assume the following.

$$\forall X0. ((\neg v1_xboole_0 X0) \wedge (v1_trees_1 X0)) \Rightarrow (\exists X1. m2_trees_1 X1 X0) \quad (11)$$

Assume the following.

$$\forall X0. ((\neg v1_xboole_0 X0) \wedge (v1_trees_1 X0)) \Rightarrow (\forall X1. (m2_trees_1 X1 X0) \Rightarrow (m1_trees_1 X1 X0)) \quad (12)$$

Assume the following.

$$\forall X0. \forall X1. (r2_xboole_0 X0 X1) \Leftrightarrow ((r1_tarSKI X0 X1) \wedge (X0 \neq X1)) \quad (13)$$

Assume the following.

$$\forall X0. \forall X1. (X1 = k1_tarSKI X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow (X2 = X0)) \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v1_xboole_0 X0) \wedge ((v1_finset_1 X0) \wedge (v1_trees_1 X0))) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge (v1_trees_1 X1)) \Rightarrow ((m4_trees_3 X1 X0) \Leftrightarrow (\forall X2. (m1_trees_1 X2 X1) \Rightarrow (\neg(\neg X2 \in X0) \wedge (\forall X3. (m3_trees_3 X3 X0) \Rightarrow (\neg r2_xboole_0 X3 X2))))))) \quad (15) \end{aligned}$$

Theorem 1

$$\forall X0. ((\neg v1_xboole_0 X0) \wedge (v1_trees_1 X0)) \Rightarrow (m4_trees_3 X0 (k2_trees_1 k6_numbers))$$