

t49_trees_9

(TMQB9tV7nNWEX9tUiJ7Vix1wYXbgvoW621C)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_trees_1 : \iota \Rightarrow o$ be given. Let $v1_trees_9 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v2_trees_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_trees_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0) \wedge ((v1_trees_1 X0) \wedge (v1_trees_9 X0))) \Rightarrow (\neg(\neg v1_finset_1 X0) \wedge (\forall X1.(m1_trees_2 X1 X0) \Rightarrow (v1_finset_1 X1))) \quad (1)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0) \wedge (v1_trees_1 X0)) \Rightarrow (\forall X1.(m1_trees_2 X1 X0) \Rightarrow (\exists X2.((v2_trees_2 X2 X0) \wedge (m1_trees_2 X2 X0)) \wedge (r1_tarski X1 X2))) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((r1_tarski X0 X1) \wedge (v1_finset_1 X1)) \Rightarrow (v1_finset_1 X0) \quad (3)$$

Assume the following.

$$\forall X0.(\neg v1_finset_1 X0) \Rightarrow (\neg v1_xboole_0 X0) \quad (4)$$

Theorem 1

$$\forall X0.((\neg v1_xboole_0 X0) \wedge ((v1_trees_1 X0) \wedge (v1_trees_9 X0))) \Rightarrow (\neg(\neg v1_finset_1 X0) \wedge (\forall X1.((v2_trees_2 X1 X0) \wedge (m1_trees_2 X1 X0)) \Rightarrow (v1_finset_1 X1)))$$