

t5_trees_3
(TMNG4vqjgrQp8Up4LdCqBAUPhuKfgxeK7dX)

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Let $v1_trees_3 : \iota \Rightarrow o$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. k2_xboole_0 (k3_xboole_0 X0 X1) (k4_xboole_0 X0 X1) = X0 \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. k4_xboole_0 X0 (k4_xboole_0 X0 X1) = k3_xboole_0 X0 X1 \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_trees_3 X0) \wedge (v1_trees_3 X1)) \Leftrightarrow (v1_trees_3 (k2_xboole_0 X0 X1)) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. k6_subset_1 X0 X1 = k4_xboole_0 X0 X1 \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. k3_xboole_0 X0 X1 = k3_xboole_0 X1 X0 \quad (5)$$

Theorem 1

$$\forall X0. \forall X1. (v1_trees_3 X0) \Rightarrow ((v1_trees_3 (k3_xboole_0 X0 X1)) \wedge ((v1_trees_3 (k3_xboole_0 X1 X0)) \wedge (v1_trees_3 (k6_subset_1 X0 X1))))$$