

t11_trees_3
(TMMLjJodLdiLop8BkonieBCpK7ZH4Pi7o8F)

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Let $v3_trees_3 : \iota \Rightarrow o$ 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 $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v3_trees_2 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. k6_subset_1 X0 X1 = k4_xboole_0 X0 X1 \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (X2 = k4_xboole_0 X0 X1) \Leftrightarrow (\forall X3. \\ (X3 \in X2) \Leftrightarrow ((X3 \in X0) \wedge (\neg X3 \in X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. (v3_trees_3 X0) \Leftrightarrow (\forall X1. (X1 \in X0) \Rightarrow ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v3_trees_2 X1)))) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (X2 = k3_xboole_0 X0 X1) \Leftrightarrow (\forall X3. \\ (X3 \in X2) \Leftrightarrow ((X3 \in X0) \wedge (X3 \in X1))) \end{aligned} \quad (4)$$

Theorem 1

$$\begin{aligned} \forall X0. \forall X1. (v3_trees_3 X0) \Rightarrow ((v3_trees_3 (k3_xboole_0 \\ X0 X1)) \wedge ((v3_trees_3 (k3_xboole_0 X1 X0)) \wedge (v3_trees_3 (k6_subset_1 \\ X0 X1)))) \end{aligned}$$