

t30_trees_2

(TMdY7bVfdtFF6Rdy1JpwWpwrXNZ9cASfYXn)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_trees_1 : \iota \Rightarrow o$ be given. Let $v1_trees_2 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $m1_trees_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Let $m1_trees_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_trees_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0. ((\neg v1_xboole_0 X0) \wedge (v1_trees_1 X0)) \Rightarrow (\neg (\forall X1. \\ (m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow (\exists X2. ((v1_finset_1 \\ X2) \wedge (m1_trees_2 X2 X0)) \wedge (k5_card_1 X2 = X1)))) \wedge ((\forall X1. (m1_trees_1 \\ X1 X0) \Rightarrow (v1_finset_1 (k1_trees_2 X0 X1))) \wedge (\forall X1. (m1_trees_2 \\ X1 X0) \Rightarrow (v1_finset_1 X1)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v1_xboole_0 X0) \wedge (v1_trees_1 X0)) \Rightarrow (\neg (v1_trees_2 \\ X0) \wedge (\forall X1. (m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow (\exists X2. \\ (m1_trees_1 X2 X0) \wedge (\forall X3. (v1_finset_1 X3) \Rightarrow (\neg (X3 = k1_trees_2 \\ X0 X2) \wedge (r1_xreal_0 (k5_card_1 X3) X1)))))) \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} \forall X0. ((\neg v1_xboole_0 X0) \wedge ((v1_trees_1 X0) \wedge (v1_trees_2 \\ X0))) \Rightarrow (\neg (\forall X1. (m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow \\ (\exists X2. ((v1_finset_1 X2) \wedge (m1_trees_2 X2 X0)) \wedge (k5_card_1 \\ X2 = X1))) \wedge (\forall X1. (m1_trees_2 X1 X0) \Rightarrow (v1_finset_1 X1))) \end{aligned}$$