

t16_modal_1

(TMGz5Zo1yUrcmrYndgbGde1oxaKrRhbXNSD)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_trees_1 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $m1_trees_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_trees_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_wellord2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_trees_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_trees_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0) \wedge (v1_trees_1 X0)) \Rightarrow (\forall X1. \\ & (m2_finseq_1 X1 k5_numbers) \Rightarrow ((X1 \in X0) \Rightarrow (X0 = k5_trees_1 X0 X1 (k4_trees_1 \\ & X0 X1)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0) \wedge (v1_trees_1 X0)) \Rightarrow (\forall X1. \\ & ((\neg v1_xboole_0 X1) \wedge (v1_trees_1 X1)) \Rightarrow (\forall X2.(m2_finseq_1 \\ & X2 k5_numbers) \Rightarrow ((X2 \in X0) \Rightarrow (\forall X3.(m1_trees_1 X3 (k5_trees_1 \\ & X0 X2 X1)) \Rightarrow (\forall X4.(m1_trees_1 X4 X1) \Rightarrow ((X3 = k8_finseq_1 k5_numbers \\ & X2 X4) \Rightarrow (r2_wellord2 (k1_trees_2 (k5_trees_1 X0 X2 X1) X3) (k1_trees_2 \\ & X1 X4)))))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v1_xboole_0 X0) \wedge (v1_trees_1 X0)) \wedge \\ & (m1_finseq_1 X1 k5_numbers)) \Rightarrow ((\neg v1_xboole_0 (k4_trees_1 X0 X1)) \wedge \\ & (v1_trees_1 (k4_trees_1 X0 X1))) \end{aligned} \tag{4}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0) \wedge (v1_trees_1 X0)) \Rightarrow (\forall X1. \\ & (m2_finseq_1 X1 k5_numbers) \Rightarrow ((X1 \in X0) \Rightarrow (\forall X2.(m1_trees_1 \\ X2 X0) \Rightarrow (\forall X3.(m1_trees_1 X3 (k4_trees_1 X0 X1)) \Rightarrow ((X2 = k8_finseq_1 \\ k5_numbers X1 X3) \Rightarrow (r2_wellord2 (k1_trees_2 X0 X2) (k1_trees_2 \\ (k4_trees_1 X0 X1) X3))))))) \end{aligned}$$