

t14_trees_1

(TMXD4HzoBbqzN6wXSzafdEWr9YnULwBkTQj)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k7_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_trees_1 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1_tarski\ X0\ X1) \wedge (r2_xboole_0\ X1\ X2)) \Rightarrow (r2_xboole_0\ X0\ X2) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1\ X0) \wedge ((v1_funct_1\ X0) \wedge (v1_finseq_1\ X0))) \Rightarrow \\ & (\forall X1. ((v1_relat_1\ X1) \wedge ((v1_funct_1\ X1) \wedge (v1_finseq_1\ X1)))) \Rightarrow \\ & ((r1_tarski\ X0\ X1) \Leftrightarrow (\exists X2. ((v1_relat_1\ X2) \wedge ((v1_funct_1\ X2) \wedge (v1_finseq_1\ X2)))) \wedge (X1 = k7_finseq_1\ X0\ X2))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1\ X0) \wedge ((v1_funct_1\ X0) \wedge (v1_finseq_1\ X0))) \Rightarrow \\ & (\forall X1. ((v1_relat_1\ X1) \wedge ((v1_funct_1\ X1) \wedge (v1_finseq_1\ X1)))) \Rightarrow \\ & ((X0 \in k1_trees_1\ X1) \Leftrightarrow (r2_xboole_0\ X0\ X1)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1_relat_1\ X0) \wedge ((v1_funct_1\ X0) \wedge (v1_finseq_1\ X0))) \wedge \\ & ((v1_relat_1\ X1) \wedge ((v1_funct_1\ X1) \wedge (v1_finseq_1\ X1)))) \Rightarrow \\ & ((v1_relat_1\ (k7_finseq_1\ X0\ X1)) \wedge ((v1_funct_1\ (k7_finseq_1\ X0\ X1)) \wedge \\ & (v1_finseq_1\ (k7_finseq_1\ X0\ X1)))) \end{aligned} \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((v1_relat_1\ X0) \wedge ((v1_funct_1\ X0) \wedge (v1_finseq_1\ X0))) \Rightarrow \\ & (\forall X1. ((v1_relat_1\ X1) \wedge ((v1_funct_1\ X1) \wedge (v1_finseq_1\ X1)))) \Rightarrow \\ & (\forall X2. ((v1_relat_1\ X2) \wedge ((v1_funct_1\ X2) \wedge (v1_finseq_1\ X2)))) \Rightarrow \\ & ((k7_finseq_1\ X1\ X2 \in k1_trees_1\ X0) \Rightarrow (X1 \in k1_trees_1\ X0))) \end{aligned}$$