t4_trees_a (TMKhRj7HvAkTzAWHmCttUEYT7vwDfoJrd2h)

October 27, 2020

Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v1\_trees\_1 : \iota \Rightarrow o$ be given. Let $m4\_trees\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_trees\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_numbers : \iota$ be given. Let $r2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2\_trees\_1 : \iota \Rightarrow o$ be given. 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. Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1\_subset\_1\ X0\ X1) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(\neg(\neg r2\_xboole\_0\ X0\ X1) \wedge ((X0 \neq X1) \wedge (\neg r2\_xboole\_0\ X1\ X0))) \Leftrightarrow (r3\_xboole\_0\ X0\ X1) \tag{2}$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0) \wedge (v1\_trees\_1\ X0)) \Rightarrow (\forall X1.\ (m1\_trees\_1\ X1\ X0) \Leftrightarrow (m1\_subset\_1\ X1\ X0)) \tag{3}$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0) \wedge (v1\_trees\_1\ X0)) \Rightarrow (\forall X1.\ (m4\_trees\_1\ X1\ X0) \Rightarrow (v2\_trees\_1\ X1)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski\ X0\ X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \tag{5}$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0) \wedge (v1\_trees\_1\ X0)) \Rightarrow (\forall X1.\ (v2\_trees\_1\ X1) \Rightarrow ((m4\_trees\_1\ X1\ X0) \Leftrightarrow (r1\_tarski\ X1\ X0))) \tag{6}$$

Assume the following.

$$\forall X0.(v2\_trees\_1\ X0)\Leftrightarrow((\forall X1.(X1 \in X0)\Rightarrow((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finseq\_1\ X1))))\wedge(\forall X1.((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finseq\_1\ X1)))\Rightarrow(\forall X2.((v1\_relat\_1\ X2)\wedge((v1\_funct\_1\ X2)\wedge(v1\_finseq\_1\ X2)))\Rightarrow(\neg(X1 \in X0)\wedge((X2 \in X0)\wedge((X1 \neq X2)\wedge(r3\_xboole\_0\ X1\ X2))))))) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.(r2\_xboole\_0\ X0\ X1)\Rightarrow(\neg r2\_xboole\_0\ X1\ X0) \tag{8}$$

Theorem 1

$$\forall X0.((\neg v1\_xboole\_0\ X0)\wedge(v1\_trees\_1\ X0))\Rightarrow(\forall X1.(m4\_trees\_1\ X1\ X0)\Rightarrow(r1\_tarski\ X1\ (ReplSep\ (toset\ (\lambda X2 : \iota.m1\_trees\_1\ X2\ X0))\ (\lambda X2 : \iota.\forall X3.(m2\_finseq\_1\ X3\ k5\_numbers)\Rightarrow(\neg(X3 \in X1)\wedge(r2\_xboole\_0\ X3\ X2)))\ (\lambda X2 : \iota.X2))))$$