t73_trees_3 (TMbPVeyEQDqjuNZPRPjhDkSccAaTYproWJK)

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Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v1\_trees\_1 : \iota \Rightarrow o$ be given. Let $k13\_trees\_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_finseq\_1 : \iota \Rightarrow o$ be given. Let $k7\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_numbers : \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\neg(X0 \in X1) \wedge (v1\_xboole\_0\ X1) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0) \wedge (v1\_trees\_1\ X0)) \Rightarrow (\forall X1.((\neg v1\_xboole\_0\ X1) \wedge (v1\_trees\_1\ X1)) \Rightarrow (\forall X2.((v1\_relat\_1\ X2) \wedge ((v1\_funct\_1\ X2) \wedge (v1\_finseq\_1\ X2))) \Rightarrow ((X2 \in X1) \Leftrightarrow (k7\_finseq\_1\ (k12\_finseq\_1\ k5\_numbers\ np\_\_1)\ X2 \in k13\_trees\_3\ X0\ X1))))) \tag{2}$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0) \wedge (v1\_trees\_1\ X0)) \Rightarrow (\forall X1.((\neg v1\_xboole\_0\ X1) \wedge (v1\_trees\_1\ X1)) \Rightarrow (\forall X2.((v1\_relat\_1\ X2) \wedge ((v1\_funct\_1\ X2) \wedge (v1\_finseq\_1\ X2))) \Rightarrow ((X2 \in X0) \Leftrightarrow (k7\_finseq\_1\ (k12\_finseq\_1\ k5\_numbers\ k6\_numbers)\ X2 \in k13\_trees\_3\ X0\ X1)))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0) \Leftrightarrow (m1\_finseq\_1\ X1\ X1\ X0) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0) \Rightarrow ((v1\_funct\_1\ X1) \wedge ((v1\_finseq\_1\ X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ X0))))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1\ X1\ X0)\Rightarrow((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finseq\_1\ X1))) \tag{6}$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0)\wedge(v1\_trees\_1\ X0))\Rightarrow(\forall X1.((\neg v1\_xboole\_0\ X1)\wedge(v1\_trees\_1\ X1))\Rightarrow((X0 = X1)\Leftrightarrow(\forall X2.(m2\_finseq\_1\ X2\ k5\_numbers)\Rightarrow((X2 \in X0)\Leftrightarrow(X2 \in X1))))) \tag{7}$$

Theorem 1

$$\forall X0.((\neg v1\_xboole\_0\ X0)\wedge(v1\_trees\_1\ X0))\Rightarrow(\forall X1.((\neg v1\_xboole\_0\ X1)\wedge(v1\_trees\_1\ X1))\Rightarrow(\forall X2.((\neg v1\_xboole\_0\ X2)\wedge(v1\_trees\_1\ X2))\Rightarrow(\forall X3.((\neg v1\_xboole\_0\ X3)\wedge(v1\_trees\_1\ X3))\Rightarrow((k13\_trees\_3\ X0\ X1 = k13\_trees\_3\ X2\ X3)\Rightarrow((X0 = X2)\wedge(X1 = X3))))))$$