t31_trees_3 (TMb9bA4UwhEBNLy3uyoxUDULWoeeRto6R66)

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Let $v4\_trees\_3 : \iota \Rightarrow o$ be given. Let $k10\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v1\_trees\_1 : \iota \Rightarrow o$ be given. Let $v1\_trees\_3 : \iota \Rightarrow o$ be given. Let $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.(v1\_trees\_3\ (k2\_tarski\ X0\ X1)) \Leftrightarrow (((\neg v1\_xboole\_0\ X0) \wedge (v1\_trees\_1\ X0)) \wedge ((\neg v1\_xboole\_0\ X1) \wedge (v1\_trees\_1\ X1))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.k10\_xtuple\_0\ (k10\_finseq\_1\ X0\ X1) = k2\_tarski\ X0\ X1 \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ (k10\_finseq\_1\ X0\ X1)) \wedge (v1\_funct\_1\ (k10\_finseq\_1\ X0\ X1)) \tag{3}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow ((v4\_trees\_3\ X0) \Leftrightarrow (v1\_trees\_3\ (k10\_xtuple\_0\ X0))) \tag{4}$$

Theorem 1

$$\forall X0.\forall X1.(v4\_trees\_3\ (k10\_finseq\_1\ X0\ X1)) \Leftrightarrow (((\neg v1\_xboole\_0\ X0) \wedge (v1\_trees\_1\ X0)) \wedge ((\neg v1\_xboole\_0\ X1) \wedge (v1\_trees\_1\ X1)))$$