

t6_hilbert2

(TMG2uqnnfiDKPsiv8wohXxoJKpkkzydvTiF)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v3_trees_2 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_trees_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v6_trees_3 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k4_trees_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k11_trees_3 : \iota \Rightarrow \iota$ be given. Let $k2_funct_6 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k5_trees_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (v1_relat_1 (k10_finseq_1 X0 X1)) \wedge (v1_funct_1 (k10_finseq_1 X0 X1)) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v3_trees_2 X0))) \wedge ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v3_trees_2 X1))) \Rightarrow \\ ((\neg v1_xboole_0 (k10_finseq_1 X0 X1)) \wedge (v6_trees_3 (k10_finseq_1 X0 X1))) \quad (2) \end{aligned}$$

Assume the following.

$$\forall X0. \forall X1. v1_finseq_1 (k10_finseq_1 X0 X1) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \Rightarrow ((v1_relat_1 (k4_trees_4 X0 X1)) \wedge ((v1_funct_1 (k4_trees_4 X0 X1)) \wedge (v3_trees_2 (k4_trees_4 X0 X1)))) \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v3_trees_2 X1))) \Rightarrow (\forall X2. ((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge (v3_trees_2 X2))) \Rightarrow (k6_trees_4 X0 X1 X2 = k4_trees_4 X0 (k10_finseq_1 X1 X2))) \quad (5) \end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 \\
& X1)))\Rightarrow((v6_trees_3 X1)\Rightarrow(\forall X2.((v1_relat_1 X2)\wedge((v1_funct_1 \\
& X2)\wedge(v3_trees_2 X2)))\Rightarrow((X2 = k4_trees_4 X0 X1)\Leftrightarrow((\exists X3.(\\
& (v1_relat_1 X3)\wedge((v1_funct_1 X3)\wedge((v1_finseq_1 X3)\wedge(v6_trees_3 \\
& X3))))\wedge((X1 = X3)\wedge(k9_xtuple_0 X2 = k11_trees_3 (k2_funct_6 X3))))\wedge \\
& ((k1_funct_1 X2 k1_xboole_0 = X0)\wedge(\forall X3.(m1_subset_1 X3 \\
& k5_numbers)\Rightarrow((\neg r1_xreal_0 (k3_finseq_1 X1) X3)\Rightarrow(k5_trees_2 \\
& X2 (k12_finseq_1 k5_numbers X3) = k1_funct_1 X1 (k2_nat_1 X3 np_1)))))))))) \\
& \tag{6}
\end{aligned}$$

Theorem 1

$$\begin{aligned}
& \forall X0.\forall X1.((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v3_trees_2 \\
& X1)))\Rightarrow(\forall X2.((v1_relat_1 X2)\wedge((v1_funct_1 X2)\wedge(v3_trees_2 \\
& X2)))\Rightarrow(k1_funct_1 (k6_trees_4 X0 X1 X2) k1_xboole_0 = X0))
\end{aligned}$$