

t6_dtconstr (TM-
Tod1spEvcvd5YVdPLDeUBtA87U7dBYpEA)

October 27, 2020

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 $k14_trees_3 : \iota \Rightarrow \iota$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $np_1 : \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v6_trees_3 : \iota \Rightarrow o$ be given. Let $k7_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_finseq_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge (v1_finseq_1 X2))) \Rightarrow ((X2 = k10_finseq_1 X0 X1) \Leftrightarrow ((k3_finseq_1 X2 = np_2) \wedge ((k1_funct_1 X2 np_1 = X0) \wedge (k1_funct_1 X2 np_2 = X1)))) \quad (2)$$

Assume the following.

$$(k2_finseq_1 np_1 = k1_tarski np_1) \wedge (k2_finseq_1 np_2 = k2_tarski np_1 np_2) \quad (3)$$

Assume the following.

$$((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)) \Rightarrow (k1_relset_1 X0 X1 = k9_xtuple_0 X1) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 (k10_finseq_1 X0 X1))\wedge(v1_funct_1 (k10_finseq_1 X0 X1)) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v3_trees_2 \\ X0)))\wedge((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v3_trees_2 X1))))\Rightarrow \\ ((\neg v1_xboole_0 (k10_finseq_1 X0 X1))\wedge(v6_trees_3 (k10_finseq_1 \\ X0 X1))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.v1_finseq_1 (k10_finseq_1 X0 X1) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v4_relat_1 X1 X0))\Rightarrow(\\ m1_subset_1 (k1_relset_1 X0 X1) (k1_zfmisc_1 X0)) \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow \\ ((v1_relat_1 (k14_trees_3 X0))\wedge((v1_funct_1 (k14_trees_3 X0))\wedge \\ (v1_finseq_1 (k14_trees_3 X0)))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.k10_finseq_1 X0 X1 = k7_finseq_1 (k9_finseq_1 \\ X0) (k9_finseq_1 X1) \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow \\ (\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers)\Rightarrow((X1 = k3_finseq_1 \\ X0)\Leftrightarrow(k2_finseq_1 X1 = k9_xtuple_0 X0))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(X2 = k2_tarski X0 X1)\Leftrightarrow(\forall X3. \\ (X3 \in X2)\Leftrightarrow((X3 = X0)\vee(X3 = X1))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow \\ (((v6_trees_3 X0)\Rightarrow(\forall X1.((v1_relat_1 X1)\wedge((v1_funct_1 \\ X1)\wedge(v1_finseq_1 X1))))\Rightarrow((X1 = k14_trees_3 X0)\Leftrightarrow((k1_relset_1 \\ k5_numbers X1 = k1_relset_1 k5_numbers X0)\wedge(\forall X2.(m1_subset_1 \\ X2 k5_numbers)\Rightarrow(\neg(X2 \in k1_relset_1 k5_numbers X0)\wedge(\forall X3. \\ ((v1_relat_1 X3)\wedge((v1_funct_1 X3)\wedge(v3_trees_2 X3))))\Rightarrow(\neg(X3 = \\ k1_funct_1 X0 X2)\wedge(k1_funct_1 X1 X2 = k1_funct_1 X3 k1_xboole_0)))))))))) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.k2_tarSKI X0 X1 = k2_tarSKI X1 X0 \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow \\ ((v1_relat_1 X0)\wedge((v4_relat_1 X0 k5_numbers)\wedge((v1_funct_1 X0)\wedge \\ (v1_finseq_1 X0)))) \quad (16) \end{aligned}$$

Theorem 1

$$\begin{aligned} \forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v3_trees_2 X0)))\Rightarrow \\ (\forall X1.((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v3_trees_2 X1)))\Rightarrow \\ (k14_trees_3 (k10_finseq_1 X0 X1) = k10_finseq_1 (k1_funct_1 X0 \\ k1_xboole_0) (k1_funct_1 X1 k1_xboole_0))) \end{aligned}$$