

t20_trees_4 (TMQBGzNwETQghGDP- DAZB2yk6MtVkphZid3H)

October 27, 2020

Let $k3_trees_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k1_trees_4 : \iota \Rightarrow \iota$ be given. Let $k4_trees_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v3_trees_2 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k2_trees_1 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_trees_3 : \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v6_trees_3 : \iota \Rightarrow o$ be given. Let $k2_funct_6 : \iota \Rightarrow \iota$ be given. Let $v4_trees_3 : \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $np_0 : \iota$ be given. Let $k7_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xreal_0 : \iota \Rightarrow \iota \Rightarrow o$ 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. Let $v5_trees_3 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \neg(v1_xboole_0 X0) \wedge ((X0 \neq X1) \wedge (v1_xboole_0 X1)) \quad (1)$$

Assume the following.

$$\forall X0. k1_trees_4 X0 = k1_tarski (k4_tarski k1_xboole_0 X0) \quad (2)$$

Assume the following.

$$\forall X0. (v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (3)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v3_trees_2 X0))) \Rightarrow ((k9_xtuple_0 X0 = k2_trees_1 k6_numbers) \Rightarrow (X0 = k1_trees_4 (k1_funct_1 X0 k1_xboole_0))) \quad (4)$$

Assume the following.

$$k11_trees_3 \ k1_xboole_0 = k2_trees_1 \ k6_numbers \quad (5)$$

Assume the following.

$$(k9_xtuple_0 \ k1_xboole_0 = k1_xboole_0) \wedge (k10_xtuple_0 \ k1_xboole_0 = k1_xboole_0) \quad (6)$$

Assume the following.

$$\forall X0.((v1_relat_1 \ X0) \wedge ((v1_funct_1 \ X0) \wedge (v6_trees_3 \ X0))) \Rightarrow ((k9_xtuple_0 \ (k2_funct_6 \ X0) = k9_xtuple_0 \ X0) \wedge (v4_trees_3 \ (k2_funct_6 \ X0))) \quad (7)$$

Assume the following.

$$\forall X0. \forall X1. k2_zfmisc_1 \ (k1_tarski \ X0) \ (k1_tarski \ X1) = k1_tarski \ (k4_tarski \ X0 \ X1) \quad (8)$$

Assume the following.

$$k2_trees_1 \ k6_numbers = k1_tarski \ k1_xboole_0 \quad (9)$$

Assume the following.

$$k1_card_1 \ k1_xboole_0 = k1_xboole_0 \quad (10)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 \ X1) \wedge ((v1_funct_1 \ X1) \wedge ((v1_finseq_1 \ X1) \wedge (v6_trees_3 \ X1)))) \Rightarrow (k9_xtuple_0 \ (k4_trees_4 \ X0 \ X1) = k11_trees_3 \ (k2_funct_6 \ X1)) \quad (11)$$

Assume the following.

$$v1_xboole_0 \ np_0 \quad (12)$$

Assume the following.

$$\forall X0. \forall X1. k7_funcop_1 \ X0 \ X1 = k2_funcop_1 \ X0 \ X1 \quad (13)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (14)$$

Assume the following.

$$\forall X0. ((v1_relat_1 \ X0) \wedge ((v1_funct_1 \ X0) \wedge (v1_finseq_1 \ X0))) \Rightarrow (k3_finseq_1 \ X0 = k1_card_1 \ X0) \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0.\exists X1.(m1_finseq_1 X1 X0)\wedge((v1_relat_1 X1)\wedge \\ (v4_relat_1 X1 k5_numbers)\wedge((v5_relat_1 X1 X0)\wedge((v1_funct_1 \\ X1)\wedge((v1_xboole_0 X1)\wedge((v1_finset_1 X1)\wedge(v1_finseq_1 X1)))))) \end{aligned} \quad (16)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0)\wedge(v1_relat_1 X0))\Rightarrow(\neg v1_xboole_0 (k9_xtuple_0 X0)) \quad (17)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 \\ X1)))\Rightarrow((v1_relat_1 (k4_trees_4 X0 X1))\wedge((v1_funct_1 (k4_trees_4 \\ X0 X1))\wedge(v3_trees_2 (k4_trees_4 X0 X1)))) \end{aligned} \quad (18)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 \\ X1)))\Rightarrow((v1_relat_1 (k3_trees_4 X0 X1))\wedge((v1_funct_1 (k3_trees_4 \\ X0 X1))\wedge(v3_trees_2 (k3_trees_4 X0 X1)))) \end{aligned} \quad (19)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge(v1_funct_1 X0))\Rightarrow((v1_relat_1 (k2_funct_6 X0))\wedge(v1_funct_1 (k2_funct_6 X0))) \quad (20)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 \\ X1)))\Rightarrow((v6_trees_3 X1)\Rightarrow(\forall X2.((v1_relat_1 X2)\wedge((v1_funct_1 \\ X2)\wedge(v3_trees_2 X2)))\Rightarrow((X2 = k4_trees_4 X0 X1)\Leftrightarrow((\exists X3.(\\ (v1_relat_1 X3)\wedge((v1_funct_1 X3)\wedge((v1_finseq_1 X3)\wedge(v6_trees_3 \\ X3))))\wedge((X1 = X3)\wedge(k9_xtuple_0 X2 = k11_trees_3 (k2_funct_6 X3))))\wedge \\ ((k1_funct_1 X2 k1_xboole_0 = X0)\wedge(\forall X3.(m1_subset_1 X3 \\ k5_numbers)\Rightarrow((\neg r1_xreal_0 (k3_finseq_1 X1) X3)\Rightarrow(k5_trees_2 \\ X2 (k12_finseq_1 k5_numbers X3) = k1_funct_1 X1 (k2_nat_1 X3 np_1)))))))))) \end{aligned} \quad (21)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 \\ X1)))\Rightarrow(\forall X2.((v1_relat_1 X2)\wedge((v1_funct_1 X2)\wedge(v3_trees_2 \\ X2)))\Rightarrow((X2 = k3_trees_4 X0 X1)\Leftrightarrow((k9_xtuple_0 X2 = k2_trees_1 (k3_finseq_1 \\ X1))\wedge((k1_funct_1 X2 k1_xboole_0 = X0)\wedge(\forall X3.(m1_subset_1 \\ X3 k5_numbers)\Rightarrow((\neg r1_xreal_0 (k3_finseq_1 X1) X3)\Rightarrow(k1_funct_1 \\ X2 (k12_finseq_1 k5_numbers X3) = k1_funct_1 X1 (k2_nat_1 X3 np_1)))))))))) \end{aligned} \quad (22)$$

Assume the following.

$$\forall X0.k1_trees_4 X0 = k7_funcop_1 (k2_trees_1 k6_numbers) X0 \quad (23)$$

Assume the following.

$$\forall X0.\forall X1.k2_funcop_1 X0 X1 = k2_zfmisc_1 X0 (k1_tarSKI X1) \quad (24)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (v1_relat_1 X0) \quad (25)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (v1_funct_1 X0) \quad (26)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_xboole_0 X0))) \Rightarrow \\ & ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v4_trees_3 X0) \wedge ((v5_trees_3 \\ & X0) \wedge (v6_trees_3 X0))))) \end{aligned} \quad (27)$$

Theorem 1

$$\forall X0.(k3_trees_4 X0 k1_xboole_0 = k1_trees_4 X0) \wedge (k4_trees_4 X0 k1_xboole_0 = k1_trees_4 X0)$$