

t7_trees_1

(TMU_xFE1YHkwzGTWE7rPEt48j2FFWFLYLEpd)

October 27, 2020

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 $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_finseq_1 : \iota \Rightarrow \iota$ be given. Let $r2_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $np_0 : \iota$ be given. Let $k5_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v3_card_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_zfmisc_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Rightarrow (r1_tarski (k10_xtuple_0 X0) (k10_xtuple_0 X1)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \neg (v1_xboole_0 X0) \wedge ((X0 \neq X1) \wedge (v1_xboole_0 X1)) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ & (\forall X1. ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1)))) \Rightarrow \\ & (((X0 = k7_finseq_1 X0 X1) \vee (X0 = k7_finseq_1 X1 X0)) \Rightarrow (X1 = k1_xboole_0)) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. (v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (v1_relat_1 X1) \Rightarrow ((r1_tarski (k9_xtuple_0 X1) X0) \Rightarrow (k5_relat_1 X1 X0 = X1)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 X1)\Rightarrow(r1_tarski (k5_relat_1 X1 X0) X1) \quad (6)$$

Assume the following.

$$\forall X0.k2_finseq_2 np_1 X0 = k9_finseq_1 X0 \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow \\ (\forall X1.((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 X1)))\Rightarrow(r1_tarski (k4_finseq_1 X0) (k4_finseq_1 (k7_finseq_1 X0 X1)))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow \\ (\forall X1.((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 X1)))\Rightarrow(X0 = k5_relat_1 (k7_finseq_1 X0 X1) (k4_finseq_1 X0))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((r1_tarski X0 X1)\wedge(r1_tarski X1 X2))\Rightarrow(r1_tarski X0 X2) \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow \\ (\forall X1.((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 X1)))\Rightarrow((r1_tarski X0 X1)\Leftrightarrow(\exists X2.((v1_relat_1 X2)\wedge((v1_funct_1 X2)\wedge(v1_finseq_1 X2))))\wedge(X1 = k7_finseq_1 X0 X2))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge(v1_funct_1 X0))\Rightarrow(\forall X1.(r1_tarski X1 X0)\Rightarrow((v1_relat_1 X1)\wedge(v1_funct_1 X1))) \quad (12)$$

Assume the following.

$$v1_xboole_0 np_0 \quad (13)$$

Assume the following.

$$\forall X0.k9_finseq_1 X0 = k5_finseq_1 X0 \quad (14)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (15)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (k4_finseq_1 X0 = k9_xtuple_0 X0) \quad (16)$$

Assume the following.

$$\exists X0.v1_xboole_0 X0 \quad (17)$$

Assume the following.

$$\forall X0.v1_finseq_1 (k5_finseq_1 X0) \quad (18)$$

Assume the following.

$$\forall X0.v3_card_1 (k5_finseq_1 X0) \text{ } np_1 \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge (v1_funct_1 X1) \wedge (v1_finseq_1 X1)) \quad (20)$$

Assume the following.

$$\forall X0.(v1_relat_1 (k9_finseq_1 X0)) \wedge (v1_funct_1 (k9_finseq_1 X0)) \quad (21)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \wedge ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1)))) \Rightarrow \\ & ((v1_relat_1 (k7_finseq_1 X0 X1)) \wedge ((v1_funct_1 (k7_finseq_1 X0 X1)) \wedge (v1_finseq_1 (k7_finseq_1 X0 X1)))) \end{aligned} \quad (22)$$

Assume the following.

$$\forall X0.\forall X1.(r2_xboole_0 X0 X1) \Leftrightarrow ((r1_tarski X0 X1) \wedge (X0 \neq X1)) \quad (23)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \Rightarrow ((m1_finseq_1 X1 X0) \Leftrightarrow (r1_tarski (k10_xtuple_0 X1) X0)) \quad (24)$$

Assume the following.

$$k1_xboole_0 = \text{the } (\lambda X0 : \iota.v1_xboole_0 X0) \quad (25)$$

Assume the following.

$$\forall X0.(v3_card_1 X0 \text{ } np_1) \Rightarrow ((\neg v1_xboole_0 X0) \wedge (v1_zfmisc_1 X0)) \quad (26)$$

Theorem 1

$$\begin{aligned} & \forall X0.\forall X1.((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \Rightarrow (\forall X2.((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge (v1_finseq_1 X2)))) \Rightarrow ((r1_tarski (k7_finseq_1 X1 (k9_finseq_1 X0)) X2) \Rightarrow (r2_xboole_0 X1 X2)) \end{aligned}$$