

t30_comput_1

(TMPX4jUTUMJF5wjswhiNv5iLHFcYv9pxfVL)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k2_comput_1 : \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v2_margrel1 : \iota \Rightarrow o$ be given. Let $k19_margrel1 : \iota \Rightarrow \iota$ be given. Let $v3_comput_1 : \iota \Rightarrow o$ be given. Let $k4_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k6_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k6_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k3_finseq_2 : \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k3_rfunct_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $m1_rfunct_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_rfunct_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_funct_1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. k4_finseq_2\ k6_numbers\ X0 = k6_domain_1\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ X0))\ (k6_finseq_1\ X0) \quad (1)$$

Assume the following.

$$\forall X0. (v1_xboole_0\ X0) \Rightarrow (X0 = k1_xboole_0) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ X2))) \Rightarrow (m1_subset_1\ X0\ X2) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1\ X0\ (k1_zfmisc_1\ X1)) \Leftrightarrow (r1_tarski\ X0\ X1) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski\ X0\ (k1_tarski\ X1)) \Leftrightarrow ((X0 = k1_xboole_0) \vee (X0 = k1_tarski\ X1)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\neg(X0 \in X1) \wedge (\forall X2.\neg(X2 \in X1) \wedge (\forall X3.\neg(X3 \in X1) \wedge (X3 \in X2))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1_funct_1 X2) \wedge ((v2_margrel1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k3_finseq_2 X0) X1)))))) \Rightarrow (r1_tarski (k1_relset_1 (k3_finseq_2 X0) X2) (k4_finseq_2 (k19_margrel1 X2) X0)) \quad (8)$$

Assume the following.

$$k19_margrel1 k1_xboole_0 = k6_numbers \quad (9)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow (k6_domain_1 X0 X1 = k1_tarski X1) \quad (11)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.k3_rfunct_3 X0 X1 = k4_partfun1 X0 X1 \quad (13)$$

Assume the following.

$$\forall X0.k3_finseq_2 X0 = k13_finseq_1 X0 \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)) \Rightarrow (k1_relset_1 X0 X1 = k9_xtuple_0 X1) \quad (15)$$

Assume the following.

$$\forall X0.\exists X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \wedge (v1_xboole_0 X1) \quad (16)$$

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.

$$\forall X0.v1_xboole_0 (k6_finseq_1 X0) \quad (18)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (19)$$

Assume the following.

$$\forall X0.\neg v1_xboole_0 (k1_zfmisc_1 X0) \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.\neg v1_xboole_0 (k4_partfun1 X0 X1) \quad (21)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X2) \wedge (m1_rfunc_3 \\ & X2 X0 X1)) \Rightarrow (\forall X3.(m2_rfunc_3 X3 X0 X1 X2) \Rightarrow ((v1_funct_1 X3) \wedge \\ & (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \end{aligned} \quad (22)$$

Assume the following.

$$\forall X0.\forall X1.m1_rfunc_3 (k3_rfunc_3 X0 X1) X0 X1 \quad (23)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 (k2_comput_1 X0)) \wedge (m1_rfunc_3 (k2_comput_1 X0) (k3_finseq_2 X0) X0) \quad (24)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v2_margrel1 X0))) \Rightarrow (m1_subset_1 (k19_margrel1 X0) k5_numbers) \quad (25)$$

Assume the following.

$$\begin{aligned} & \forall X0.k2_comput_1 X0 = \text{ReplSep} (\text{toset} (\lambda X1 : \iota.m2_rfunc_3 \\ & X1 (k3_finseq_2 X0) X0 (k3_rfunc_3 (k3_finseq_2 X0) X0))) (\lambda X1 : \\ & \iota.v2_margrel1 X1) (\lambda X1 : \iota.X1) \end{aligned} \quad (26)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_relat_1 X0) \Rightarrow ((v3_comput_1 X0) \Leftrightarrow (\forall X1.((\\ & v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (\forall X2.((v1_relat_1 X2) \wedge \\ & (v1_funct_1 X2)) \Rightarrow (((X1 \in k10_xtuple_0 X0) \wedge (X2 \in k10_xtuple_0 X0)) \Rightarrow \\ & ((\neg (v1_xboole_0 X1) \wedge ((\neg v1_xboole_0 X2) \wedge (k9_xtuple_0 X2 \neq k1_tarski \\ & k1_xboole_0))) \wedge (\neg (\neg v1_xboole_0 X1) \wedge ((\neg v1_xboole_0 X2) \wedge (\forall X3. \\ & (m1_subset_1 X3 k5_numbers) \Rightarrow (\forall X4.(\neg v1_xboole_0 X4) \Rightarrow (\\ & \neg (r1_tarski (k9_xtuple_0 X1) (k4_finseq_2 X3 X4)) \wedge (r1_tarski \\ & (k9_xtuple_0 X2) (k4_finseq_2 X3 X4))))))))))))) \end{aligned} \quad (27)$$

Assume the following.

$$\forall X0.(v4_funct_1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (v1_relat_1 X1) \wedge (v1_funct_1 X1)) \quad (28)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (v4_funct_1 X0) \quad (29)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X1 (k2_comput_1 X0)) \Rightarrow (v2_margrel1 X1) \quad (30)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow ((v4_relat_1 X2 X0) \wedge (v5_relat_1 X2 X1)) \quad (31)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (32)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_rfunct_3 X2 X0 X1) \Rightarrow ((\neg v1_xboole_0 X2) \Rightarrow ((\neg v1_xboole_0 X2) \wedge (v4_funct_1 X2))) \quad (33)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(v1_relat_1 X1) \Rightarrow ((\\ & (r1_tarski (k10_xtuple_0 X1) (k2_comput_1 X0)) \wedge (\forall X2.(\\ & (v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge (v2_margrel1 X2)))) \Rightarrow (\forall X3. \\ & ((v1_relat_1 X3) \wedge ((v1_funct_1 X3) \wedge (v2_margrel1 X3)))) \Rightarrow (((X2 \in \\ & k10_xtuple_0 X1) \wedge (X3 \in k10_xtuple_0 X1)) \Rightarrow (k19_margrel1 X2 = k19_margrel1 \\ & X3)))) \Rightarrow (v3_comput_1 X1)) \end{aligned}$$