

t28_great_1

(TMavwdR55HGDbRW3mb7xqcTZYgpkx2CgX3b)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_classes2 : \iota \Rightarrow o$ be given. Let $r1_great_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_algstr_0 : \iota$ be given. Let $r1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k5_vectsp_1 : \iota \Rightarrow \iota$ be given. Let $k8_funct_5 : \iota$ 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 $k1_tarski : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_funct_5 : \iota$ be given. Let $k3_xtuple_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_xtuple_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_funct_5 : \iota$ be given. Let $g2_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v13_struct_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v8_algstr_0 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $u2_struct_0 : \iota \Rightarrow \iota$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $u1_algstr_0 : \iota \Rightarrow \iota$ be given. Let $v2_rlvect_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} r1_funct_2 (u1_struct_0 k3_algstr_0) (u1_struct_0 k3_algstr_0) \\ np_1 np_1 (k5_vectsp_1 k3_algstr_0) k8_funct_5 \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. ((\neg v1_xboole_0 X0) \wedge (v1_classes2 X0)) \Rightarrow (k1_xboole_0 \in X0) \quad (2)$$

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.

$$np_1 = k1_tarski k1_xboole_0 \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge (v1_classes2 X0)) \Rightarrow ((k1_tarski \\ k1_xboole_0 \in X0) \wedge ((k4_tarski (k1_tarski k1_xboole_0) (k1_tarski \\ k1_xboole_0) \in X0) \wedge ((k2_zfmisc_1 (k1_tarski k1_xboole_0) (k1_tarski \\ k1_xboole_0) \in X0) \wedge ((k9_funct_5 \in X0) \wedge (k8_funct_5 \in X0)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge (v1_classes2 X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 X0) \Rightarrow (\forall X2.(m1_subset_1 X2 X0) \Rightarrow (\forall X3. \\ (m1_subset_1 X3 X0) \Rightarrow (\forall X4.(m1_subset_1 X4 X0) \Rightarrow ((k3_xtuple_0 \\ X1 X2 X3 \in X0) \wedge (k6_xtuple_0 X1 X2 X3 X4 \in X0)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\neg v1_xboole_0 np_1 \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.r1_tarski X0 X0 \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ ((\neg v1_xboole_0 X1) \wedge ((\neg v1_xboole_0 X3) \wedge (((v1_funct_1 X4) \wedge ((\\ v1_funct_2 X4 X0 X1) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\ X0 X1)))))) \wedge ((v1_funct_1 X5) \wedge ((v1_funct_2 X5 X2 X3) \wedge (m1_subset_1 \\ X5 (k1_zfmisc_1 (k2_zfmisc_1 X2 X3)))))))) \Rightarrow ((r1_funct_2 X0 X1 \\ X2 X3 X4 X5) \Leftrightarrow (X4 = X5)) \end{aligned} \quad (10)$$

Assume the following.

$$k5_funct_5 = k1_xboole_0 \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((v1_funct_1 X1) \wedge ((v1_funct_2 \\ X1 (k2_zfmisc_1 X0 X0) X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ (k2_zfmisc_1 X0 X0) X0)))))) \wedge (m1_subset_1 X2 X0)) \Rightarrow (\forall X3. \\ \forall X4.\forall X5.(g2_algstr_0 X0 X1 X2 = g2_algstr_0 X3 X4 X5) \Rightarrow \\ ((X0 = X3) \wedge ((X1 = X4) \wedge (X2 = X5)))) \end{aligned} \quad (12)$$

Assume the following.

$$(v13_struct_0 k3_algstr_0 np_1) \wedge (v8_algstr_0 k3_algstr_0) \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge (((v1_funct_1 \\ X1) \wedge ((v1_funct_2 X1 (k2_zfmisc_1 X0 X0) X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) X0)))))) \wedge (m1_subset_1 X2 X0)) \Rightarrow \\ ((\neg v2_struct_0 (g2_algstr_0 X0 X1 X2)) \wedge (v8_algstr_0 (g2_algstr_0 \\ X0 X1 X2)))) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.(l2_algstr_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l1_algstr_0 X0)) \quad (15)$$

Assume the following.

$$\begin{aligned} & (v1_funct_1 k9_funct_5) \wedge ((v1_funct_2 k9_funct_5 (k2_zfmisc_1 \\ & np_1 np_1) np_1) \wedge (m1_subset_1 k9_funct_5 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k2_zfmisc_1 np_1 np_1) np_1)))) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} & (v1_funct_1 k8_funct_5) \wedge ((v1_funct_2 k8_funct_5 np_1 np_1) \wedge \\ & (m1_subset_1 k8_funct_5 (k1_zfmisc_1 (k2_zfmisc_1 np_1 np_1)))) \end{aligned} \quad (17)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l2_algstr_0 X0)) \Rightarrow ((v1_funct_1 \\ & (k5_vectsp_1 X0)) \wedge ((v1_funct_2 (k5_vectsp_1 X0) (u1_struct_0 \\ & X0) (u1_struct_0 X0)) \wedge (m1_subset_1 (k5_vectsp_1 X0) (k1_zfmisc_1 \\ & (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0))))) \end{aligned} \quad (18)$$

Assume the following.

$$m1_subset_1 k5_funct_5 np_1 \quad (19)$$

Assume the following.

$$l2_algstr_0 k3_algstr_0 \quad (20)$$

Assume the following.

$$k3_algstr_0 = g2_algstr_0 np_1 k9_funct_5 k5_funct_5 \quad (21)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. k6_xtuple_0 X0 X1 \\ & X2 X3 = k4_tarski (k3_xtuple_0 X0 X1 X2) X3 \end{aligned} \quad (22)$$

Assume the following.

$$\forall X0.(l2_struct_0 X0) \Rightarrow (k4_struct_0 X0 = u2_struct_0 X0) \quad (23)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. k3_xtuple_0 X0 X1 X2 = k4_tarski \\ & (k4_tarski X0 X1) X2 \end{aligned} \quad (24)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (r1_grcat_1 X0 X1) \Leftrightarrow (\exists X2. \exists X3. \\ & \exists X4. \exists X5. (X0 = k6_xtuple_0 X2 X3 X4 X5) \wedge (\exists X6. \\ & ((\neg v2_struct_0 X6) \wedge ((v8_algstr_0 X6) \wedge ((v13_algstr_0 X6) \wedge ((\\ & v3_rlvect_1 X6) \wedge ((v4_rlvect_1 X6) \wedge (l2_algstr_0 X6)))))) \wedge ((\\ & X1 = X6) \wedge ((X2 = u1_struct_0 X6) \wedge ((X3 = u1_algstr_0 X6) \wedge ((X4 = k5_vectsp_1 \\ & X6) \wedge (X5 = k4_struct_0 X6)))))) \end{aligned} \quad (25)$$

Assume the following.

$$\forall X0.(l2_algstr_0 X0) \Rightarrow ((v13_struct_0 X0 \text{ np_1}) \Rightarrow ((v13_struct_0 X0 \text{ np_1}) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0)))))) \quad (26)$$

Assume the following.

$$\forall X0.(l2_algstr_0 X0) \Rightarrow ((v8_algstr_0 X0) \Rightarrow (X0 = g2_algstr_0 (u1_struct_0 X0) (u1_algstr_0 X0) (u2_struct_0 X0))) \quad (27)$$

Theorem 1

$$\forall X0.((\neg v1_xboole_0 X0) \wedge (v1_classes2 X0)) \Rightarrow (\exists X1. (X1 \in X0) \wedge (r1_grcat_1 X1 k3_algstr_0))$$