

t29_glib_004 (TMaMbNWWBgzB-
VBua5gHLH8FsKfvk7gr7Ffd)

October 27, 2020

Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_glib_000 : \iota \Rightarrow o$ be given. Let $v1_glib_003 : \iota \Rightarrow o$ be given. Let $v7_glib_003 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k6_glib_000 : \iota \Rightarrow \iota$ be given. Let $k7_glib_000 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k14_glib_004 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k12_glib_004 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k10_subset_1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_glib_000 : \iota \Rightarrow \iota$ be given. Let $k11_glib_000 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. r1_tarski X0 (k2_xboole_0 X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (k1_xtuple_0 (k4_tarski X0 X1) = X0) \wedge (k2_xtuple_0 (k4_tarski X0 X1) = X1) \quad (2)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\
& \quad X0) \wedge ((v1_finset_1 X0) \wedge ((v1_glib_000 X0) \wedge ((v1_glib_003 X0) \wedge \\
& \quad (v7_glib_003 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k2_zfmisc_1 \\
& \quad (k1_zfmisc_1 (k6_glib_000 X0)) (k1_zfmisc_1 (k7_glib_000 X0)))) \Rightarrow \\
& \quad (\neg(k12_glib_004 X0 X1 \neq k1_xboole_0) \wedge (\forall X2.(m1_subset_1 \\
& \quad X2 (k6_glib_000 X0) \Rightarrow (\neg(\neg X2 \in k2_domain_1 (k1_zfmisc_1 (k6_glib_000 \\
& \quad X0)) (k1_zfmisc_1 (k7_glib_000 X0)) X1) \wedge (k14_glib_004 X0 X1 = k4_tarSKI \\
& \quad (k4_subset_1 (k6_glib_000 X0) (k2_domain_1 (k1_zfmisc_1 (k6_glib_000 \\
& \quad X0)) (k1_zfmisc_1 (k7_glib_000 X0)) X1) (k6_domain_1 (k6_glib_000 \\
& \quad X0) X2)) (k2_xboole_0 (k3_domain_1 (k1_zfmisc_1 (k6_glib_000 \\
& \quad X0)) (k1_zfmisc_1 (k7_glib_000 X0)) X1) (k1_tarSKI (k10_subset_1 \\
& \quad (k12_glib_004 X0 X1))))))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. r1_tarSKI X0 X0 \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 \\
& \quad X1) \wedge (m1_subset_1 X2 (k2_zfmisc_1 X0 X1)))) \Rightarrow (k3_domain_1 X0 X1 \\
& \quad X2 = k2_xtuple_0 X2)
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 \\
& \quad X1) \wedge (m1_subset_1 X2 (k2_zfmisc_1 X0 X1)))) \Rightarrow (k2_domain_1 X0 X1 \\
& \quad X2 = k1_xtuple_0 X2)
\end{aligned} \tag{6}$$

Assume the following.

$$\forall X0. \neg v1_xboole_0 (k1_zfmisc_1 X0) \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. (((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge \\
& \quad ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge ((v1_glib_000 X0) \wedge ((v1_glib_003 \\
& \quad X0) \wedge (v7_glib_003 X0)))))) \wedge (m1_subset_1 X1 (k2_zfmisc_1 (k1_zfmisc_1 \\
& \quad (k6_glib_000 X0)) (k1_zfmisc_1 (k7_glib_000 X0)))))) \Rightarrow (m1_subset_1 \\
& \quad (k14_glib_004 X0 X1) (k2_zfmisc_1 (k1_zfmisc_1 (k6_glib_000 X0)) \\
& \quad (k1_zfmisc_1 (k7_glib_000 X0))))
\end{aligned} \tag{8}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 \ k5_numbers) \wedge ((v1_funct_1 \\
& \quad X0) \wedge ((v1_finset_1 X0) \wedge ((v1_glib_000 X0) \wedge ((v1_glib_003 X0) \wedge \\
& \quad (v7_glib_003 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k2_zfmisc_1 \\
& \quad (k1_zfmisc_1 (k6_glib_000 X0) (k1_zfmisc_1 (k7_glib_000 X0)))) \Rightarrow \\
& \quad ((k12_glib_004 X0 X1 = k1_xboole_0) \Rightarrow (k14_glib_004 X0 X1 = X1)) \wedge \\
& \quad ((k1_funct_1 (k10_glib_000 X0) (k10_subset_1 (k12_glib_004 \\
& \quad X0 X1)) \in k2_domain_1 (k1_zfmisc_1 (k6_glib_000 X0)) (k1_zfmisc_1 \\
& \quad (k7_glib_000 X0)) X1) \Rightarrow ((k12_glib_004 X0 X1 = k1_xboole_0) \vee (k14_glib_004 \\
& \quad X0 X1 = k4_tarski (k2_xboole_0 (k2_domain_1 (k1_zfmisc_1 (k6_glib_000 \\
& \quad X0)) (k1_zfmisc_1 (k7_glib_000 X0)) X1) (k1_tarski (k1_funct_1 \\
& \quad (k11_glib_000 X0) (k10_subset_1 (k12_glib_004 X0 X1)))))) (k2_xboole_0 \\
& \quad (k3_domain_1 (k1_zfmisc_1 (k6_glib_000 X0)) (k1_zfmisc_1 (k7_glib_000 \\
& \quad X0)) X1) (k1_tarski (k10_subset_1 (k12_glib_004 X0 X1)))))) \wedge \\
& \quad (\neg(k12_glib_004 X0 X1 \neq k1_xboole_0) \wedge ((\neg(k12_glib_004 X0 X1 \neq k1_xboole_0) \wedge \\
& \quad (k1_funct_1 (k10_glib_000 X0) (k10_subset_1 (k12_glib_004 X0 \\
& \quad X1)) \in k2_domain_1 (k1_zfmisc_1 (k6_glib_000 X0)) (k1_zfmisc_1 \\
& \quad (k7_glib_000 X0)) X1) \wedge (k14_glib_004 X0 X1 \neq k4_tarski (k2_xboole_0 \\
& \quad (k2_domain_1 (k1_zfmisc_1 (k6_glib_000 X0)) (k1_zfmisc_1 (k7_glib_000 \\
& \quad X0)) X1) (k1_tarski (k1_funct_1 (k10_glib_000 X0) (k10_subset_1 \\
& \quad (k12_glib_004 X0 X1)))))) (k2_xboole_0 (k3_domain_1 (k1_zfmisc_1 \\
& \quad (k6_glib_000 X0)) (k1_zfmisc_1 (k7_glib_000 X0)) X1) (k1_tarski \\
& \quad (k10_subset_1 (k12_glib_004 X0 X1)))))))))
\end{aligned} \tag{9}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 \ k5_numbers) \wedge ((v1_funct_1 \\
& \quad X0) \wedge ((v1_finset_1 X0) \wedge ((v1_glib_000 X0) \wedge ((v1_glib_003 X0) \wedge \\
& \quad (v7_glib_003 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k2_zfmisc_1 \\
& \quad (k1_zfmisc_1 (k6_glib_000 X0) (k1_zfmisc_1 (k7_glib_000 X0)))) \Rightarrow \\
& \quad ((r1_tarski (k2_domain_1 (k1_zfmisc_1 (k6_glib_000 X0)) (k1_zfmisc_1 \\
& \quad (k7_glib_000 X0)) X1) (k2_domain_1 (k1_zfmisc_1 (k6_glib_000 \\
& \quad X0)) (k1_zfmisc_1 (k7_glib_000 X0)) (k14_glib_004 X0 X1))) \wedge (r1_tarski \\
& \quad (k3_domain_1 (k1_zfmisc_1 (k6_glib_000 X0)) (k1_zfmisc_1 (k7_glib_000 \\
& \quad X0)) X1) (k3_domain_1 (k1_zfmisc_1 (k6_glib_000 X0)) (k1_zfmisc_1 \\
& \quad (k7_glib_000 X0)) (k14_glib_004 X0 X1))))))
\end{aligned}$$