

t25_waybel29

(TMXxT9qFSp7uVQyHXandtd4EhiR9DXQRaZ4)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $v6_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v3_waybel_3 : \iota \Rightarrow o$ be given. Let $k2_yellow_1 : \iota \Rightarrow \iota$ be given. Let $u1_pre_topc : \iota \Rightarrow \iota$ be given. Let $v23_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_waybel29 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_borsuk_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_waybel24 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_waybel29 : \iota \Rightarrow \iota$ be given. Let $v4_waybel11 : \iota \Rightarrow o$ be given. Let $m1_yellow_9 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v3_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_connsp_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k1_setfam_1 : \iota \Rightarrow \iota$ 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 $v5_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_waybel26 : \iota \Rightarrow \iota$ be given. Let $k4_tarSKI : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge ((v6_pre_topc \\
 & X0) \wedge (l1_pre_topc X0)))) \Rightarrow ((v3_waybel_3 (k2_yellow_1 (u1_pre_topc \\
 & X0))) \Rightarrow (\forall X1. ((v4_waybel11 X1) \wedge (m1_yellow_9 X1 (k2_yellow_1 \\
 & (u1_pre_topc X0)))) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 \\
 & X0)) \Rightarrow (\forall X3. ((v3_pre_topc X3 X0) \wedge (m1_connsp_2 X3 X0 X2)) \Rightarrow \\
 & (\exists X4. ((v3_pre_topc X4 X1) \wedge (m1_subset_1 X4 (k1_zfmisc_1 \\
 & (u1_struct_0 X1)))) \wedge ((X3 \in X4) \wedge (m1_connsp_2 (k1_setfam_1 X4) \\
 & X0 X2))))))))) \tag{1}
 \end{aligned}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge ((v6_pre_topc \\
 & X0) \wedge (l1_pre_topc X0)))) \Rightarrow ((\forall X1. ((v4_waybel11 X1) \wedge (m1_yellow_9 \\
 & X1 (k2_yellow_1 (u1_pre_topc X0)))) \Rightarrow (\forall X2. (m1_subset_1 \\
 & X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. ((v3_pre_topc X3 X0) \wedge (m1_connsp_2 \\
 & X3 X0 X2)) \Rightarrow (\exists X4. ((v3_pre_topc X4 X1) \wedge (m1_subset_1 X4 (k1_zfmisc_1 \\
 & (u1_struct_0 X1)))) \wedge ((X3 \in X4) \wedge (m1_connsp_2 (k1_setfam_1 X4) \\
 & X0 X2)))))) \Rightarrow (v3_waybel_3 (k2_yellow_1 (u1_pre_topc X0)))) \tag{2}
 \end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge ((v6_pre_topc \\
& X0) \wedge (l1_pre_topc X0)))) \Rightarrow ((\forall X1.((v4_waybel11 X1) \wedge (m1_yellow_9 \\
& X1 (k2_yellow_1 (u1_pre_topc X0)))) \Rightarrow (\forall X2.(m1_subset_1 \\
& X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.((v3_pre_topc X3 X0) \wedge (m1_consp_2 \\
& X3 X0 X2)) \Rightarrow (\exists X4.((v3_pre_topc X4 X1) \wedge (m1_subset_1 X4 (k1_zfmisc_1 \\
& (u1_struct_0 X1)))) \wedge ((X3 \in X4) \wedge (m1_consp_2 (k1_setfam_1 X4 \\
& X0 X2)))))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge \\
& (l1_pre_topc X1))) \Rightarrow (\forall X2.((v4_waybel11 X2) \wedge (m1_yellow_9 \\
& X2 (k2_yellow_1 (u1_pre_topc X0)))) \Rightarrow (\forall X3.((v1_funct_1 \\
& X3) \wedge ((v1_funct_2 X3 (u1_struct_0 X1) (u1_struct_0 X2)) \wedge ((v5_pre_topc \\
& X3 X1 X2) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
& X1) (u1_struct_0 X2)))))) \Rightarrow ((v3_pre_topc (k5_waybel26 X3) (k2_borsuk_1 \\
& X1 X0)) \wedge (m1_subset_1 (k5_waybel26 X3) (k1_zfmisc_1 (u1_struct_0 \\
& (k2_borsuk_1 X1 X0)))))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge ((v6_pre_topc \\
& X0) \wedge (l1_pre_topc X0)))) \Rightarrow ((\forall X1.((v4_waybel11 X1) \wedge (m1_yellow_9 \\
& X1 (k2_yellow_1 (u1_pre_topc X0)))) \Rightarrow ((v3_pre_topc (ReplSep2 \\
& (toset (\lambda X2 : \iota.(v3_pre_topc X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\
& (u1_struct_0 X0)))) (\lambda X2 : \iota.toset (\lambda X3 : \iota.m1_subset_1 \\
& X3 (u1_struct_0 X0))) (\lambda X2 : \iota.\lambda X3 : \iota.X3 \in X2) (\lambda X2 : \\
& \iota.\lambda X3 : \iota.k4_tarski X2 X3)) (k2_borsuk_1 X1 X0)) \wedge (m1_subset_1 \\
& (ReplSep2 (toset (\lambda X2 : \iota.(v3_pre_topc X2 X0) \wedge (m1_subset_1 \\
& X2 (k1_zfmisc_1 (u1_struct_0 X0)))) (\lambda X2 : \iota.toset (\lambda X3 : \\
& \iota.m1_subset_1 X3 (u1_struct_0 X0))) (\lambda X2 : \iota.\lambda X3 : \iota. \\
& X3 \in X2) (\lambda X2 : \iota.\lambda X3 : \iota.k4_tarski X2 X3)) (k1_zfmisc_1 \\
& (u1_struct_0 (k2_borsuk_1 X1 X0)))))) \Rightarrow (\forall X1.((v4_waybel11 \\
& X1) \wedge (m1_yellow_9 X1 (k2_yellow_1 (u1_pre_topc X0)))) \Rightarrow (\forall X2. \\
& (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.((v3_pre_topc \\
& X3 X0) \wedge (m1_consp_2 X3 X0 X2)) \Rightarrow (\exists X4.((v3_pre_topc X4 X1) \wedge \\
& (m1_subset_1 X4 (k1_zfmisc_1 (u1_struct_0 X1)))) \wedge ((X3 \in X4) \wedge (\\
& m1_consp_2 (k1_setfam_1 X4) X0 X2))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge ((v6_pre_topc \\
& \quad X0) \wedge (l1_pre_topc X0)))) \Rightarrow ((\forall X1.((\neg v2_struct_0 X1) \wedge ((\\
& \quad v2_pre_topc X1) \wedge (l1_pre_topc X1))) \Rightarrow (\forall X2.((v4_waybel11 \\
& \quad X2) \wedge (m1_yellow_9 X2 (k2_yellow_1 (u1_pre_topc X0)))) \Rightarrow (\forall X3. \\
& \quad ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (u1_struct_0 X1) (u1_struct_0 \\
& \quad X2)) \wedge ((v5_pre_topc X3 X1 X2) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\
& \quad (u1_struct_0 X1) (u1_struct_0 X2)))))) \Rightarrow ((v3_pre_topc (k5_waybel26 \\
& \quad X3) (k2_borsuk_1 X1 X0)) \wedge (m1_subset_1 (k5_waybel26 X3) (k1_zfmisc_1 \\
& \quad (u1_struct_0 (k2_borsuk_1 X1 X0)))))) \Rightarrow (\forall X1.((v4_waybel11 \\
& \quad X1) \wedge (m1_yellow_9 X1 (k2_yellow_1 (u1_pre_topc X0)))) \Rightarrow ((v3_pre_topc \\
& \quad (ReplSep2 (toset (\lambda X2 : \iota. (v3_pre_topc X2 X0) \wedge (m1_subset_1 \\
& \quad X2 (k1_zfmisc_1 (u1_struct_0 X0)))) (\lambda X2 : \iota. toset (\lambda X3 : \\
& \quad \iota. m1_subset_1 X3 (u1_struct_0 X0)) (\lambda X2 : \iota. \lambda X3 : \iota. \\
& \quad X3 \in X2) (\lambda X2 : \iota. \lambda X3 : \iota. k4_tarski X2 X3)) (k2_borsuk_1 \\
& \quad X1 X0)) \wedge (m1_subset_1 (ReplSep2 (toset (\lambda X2 : \iota. (v3_pre_topc \\
& \quad X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0)))) (\lambda X2 : \\
& \quad \iota. toset (\lambda X3 : \iota. m1_subset_1 X3 (u1_struct_0 X0)) (\lambda X2 : \\
& \quad \iota. \lambda X3 : \iota. X3 \in X2) (\lambda X2 : \iota. \lambda X3 : \iota. k4_tarski X2 \\
& \quad X3)) (k1_zfmisc_1 (u1_struct_0 (k2_borsuk_1 X1 X0)))))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge ((v6_pre_topc \\
& \quad X0) \wedge (l1_pre_topc X0)))) \Rightarrow ((\forall X1.((\neg v2_struct_0 X1) \wedge ((\\
& \quad v2_pre_topc X1) \wedge (l1_pre_topc X1))) \Rightarrow (\forall X2.((v4_waybel11 \\
& \quad X2) \wedge (m1_yellow_9 X2 (k2_yellow_1 (u1_pre_topc X0)))) \Rightarrow (\forall X3. \\
& \quad ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (u1_struct_0 X1) (u1_struct_0 \\
& \quad X2)) \wedge ((v5_pre_topc X3 X1 X2) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\
& \quad (u1_struct_0 X1) (u1_struct_0 X2)))))) \Rightarrow ((v3_pre_topc (k5_waybel26 \\
& \quad X3) (k2_borsuk_1 X1 X0)) \wedge (m1_subset_1 (k5_waybel26 X3) (k1_zfmisc_1 \\
& \quad (u1_struct_0 (k2_borsuk_1 X1 X0)))))) \Rightarrow (\forall X1.((\neg v2_struct_0 \\
& \quad X1) \wedge ((v2_pre_topc X1) \wedge (l1_pre_topc X1))) \Rightarrow (v23_waybel_0 (k3_waybel29 \\
& \quad X1 X0) (k2_yellow_1 (u1_pre_topc (k2_borsuk_1 X1 X0))) (k3_waybel24 \\
& \quad X1 (k1_waybel29 (k2_yellow_1 (u1_pre_topc X0))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge ((v6_pre_topc \\
& \quad X0) \wedge (l1_pre_topc X0)))) \Rightarrow ((\forall X1.((\neg v2_struct_0 X1) \wedge ((\\
& \quad v2_pre_topc X1) \wedge (l1_pre_topc X1)))) \Rightarrow (v23_waybel_0 (k3_waybel29 \\
& \quad X1 X0) (k2_yellow_1 (u1_pre_topc (k2_borsuk_1 X1 X0))) (k3_waybel24 \\
& \quad X1 (k1_waybel29 (k2_yellow_1 (u1_pre_topc X0)))))) \Rightarrow (\forall X1. \\
& \quad ((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge (l1_pre_topc X1))) \Rightarrow (\forall X2. \\
& \quad ((v4_waybel11 X2) \wedge (m1_yellow_9 X2 (k2_yellow_1 (u1_pre_topc \\
& \quad X0)))) \Rightarrow (\forall X3.((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (u1_struct_0 \\
& \quad X1) (u1_struct_0 X2)) \wedge ((v5_pre_topc X3 X1 X2) \wedge (m1_subset_1 X3 \\
& \quad (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 X2)))))) \Rightarrow \\
& \quad ((v3_pre_topc (k5_waybel26 X3) (k2_borsuk_1 X1 X0)) \wedge (m1_subset_1 \\
& \quad (k5_waybel26 X3) (k1_zfmisc_1 (u1_struct_0 (k2_borsuk_1 X1 X0)))))))))
\end{aligned} \tag{7}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge ((v6_pre_topc \\
& \quad X0) \wedge (l1_pre_topc X0)))) \Rightarrow ((v3_waybel_3 (k2_yellow_1 (u1_pre_topc \\
& \quad X0))) \Leftrightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge (l1_pre_topc \\
& \quad X1)))) \Rightarrow (v23_waybel_0 (k3_waybel29 X1 X0) (k2_yellow_1 (u1_pre_topc \\
& \quad (k2_borsuk_1 X1 X0))) (k3_waybel24 X1 (k1_waybel29 (k2_yellow_1 \\
& \quad (u1_pre_topc X0))))))
\end{aligned}$$