

t19_waybel26 (TMVDwMzZqh- nxfGEym6Nm1XaWwVcuhdwFyX7)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v6_pre_topc : \iota \Rightarrow o$ be given. Let $v1_waybel25 : \iota \Rightarrow o$ be given. Let $m1_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_borsuk_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_yellow16 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_waybel26 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v5_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_borsuk_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_yellow16 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_waybel26 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_orders_2 : \iota \Rightarrow o$ be given. Let $v5_orders_2 : \iota \Rightarrow o$ be given. Let $v1_monoid_0 : \iota \Rightarrow o$ be given. Let $v3_orders_2 : \iota \Rightarrow o$ be given. Let $v4_orders_2 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\
& X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge ((v6_pre_topc \\
& X1) \wedge ((v1_waybel25 X1) \wedge (l1_pre_topc X1)))))) \Rightarrow (\forall X2.((\neg \\
& v2_struct_0 X2) \wedge (m1_pre_topc X2 X1)) \Rightarrow (\forall X3.((v1_funct_1 \\
& X3) \wedge ((v1_funct_2 X3 (u1_struct_0 X1) (u1_struct_0 X2)) \wedge ((v5_pre_topc \\
& X3 X1 X2) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
& X1) (u1_struct_0 X2)))))) \Rightarrow ((v3_borsuk_1 X3 X1 X2) \Rightarrow (r1_yellow16 \\
& (k1_waybel26 X0 X2) (k1_waybel26 X0 X1) (k3_waybel26 X0 X1 X2 X3))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge \\
& (l1_pre_topc X0))) \wedge ((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge ((\\
& v6_pre_topc X1) \wedge (l1_pre_topc X1)))))) \Rightarrow ((\neg v2_struct_0 (k1_waybel26 \\
& X0 X1)) \wedge ((v1_orders_2 (k1_waybel26 X0 X1)) \wedge (v5_orders_2 (k1_waybel26 \\
& X0 X1))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (v2_pre_topc X0) \wedge \\ & (l1_pre_topc X0)) \wedge ((\neg v2_struct_0 X1) \wedge (v2_pre_topc X1) \wedge (l1_pre_topc \\ & X1))) \Rightarrow ((\neg v2_struct_0 (k1_waybel26 X0 X1)) \wedge ((v1_monoid_0 (k1_waybel26 \\ & X0 X1)) \wedge ((v1_orders_2 (k1_waybel26 X0 X1)) \wedge ((v3_orders_2 (k1_waybel26 \\ & X0 X1)) \wedge (v4_orders_2 (k1_waybel26 X0 X1)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. (l1_pre_topc X0) \Rightarrow (\forall X1. (m1_pre_topc X1 X0) \Rightarrow (l1_pre_topc X1)) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (((\neg v2_struct_0 \\ & X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc X0))) \wedge (((\neg v2_struct_0 X1) \wedge \\ & (v2_pre_topc X1) \wedge (l1_pre_topc X1))) \wedge (((\neg v2_struct_0 X2) \wedge \\ & (v2_pre_topc X2) \wedge (l1_pre_topc X2))) \wedge ((v1_funct_1 X3) \wedge ((v1_funct_2 \\ & X3 (u1_struct_0 X1) (u1_struct_0 X2)) \wedge ((v5_pre_topc X3 X1 X2) \wedge \\ & (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 \\ & X2)))))) \Rightarrow ((v1_funct_1 (k3_waybel26 X0 X1 X2 X3)) \wedge ((v1_funct_2 \\ & (k3_waybel26 X0 X1 X2 X3) (u1_struct_0 (k1_waybel26 X0 X1)) (u1_struct_0 \\ & (k1_waybel26 X0 X2))) \wedge (m1_subset_1 (k3_waybel26 X0 X1 X2 X3) (k1_zfmisc_1 \\ & (k2_zfmisc_1 (u1_struct_0 (k1_waybel26 X0 X1)) (u1_struct_0 (\\ & k1_waybel26 X0 X2)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (v2_pre_topc X0) \wedge \\ & (l1_pre_topc X0)) \wedge ((\neg v2_struct_0 X1) \wedge (v2_pre_topc X1) \wedge (l1_pre_topc \\ & X1))) \Rightarrow ((\neg v2_struct_0 (k1_waybel26 X0 X1)) \wedge ((v1_orders_2 (k1_waybel26 \\ & X0 X1)) \wedge (l1_orders_2 (k1_waybel26 X0 X1)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\ & X0) \wedge ((v5_orders_2 X0) \wedge (l1_orders_2 X0)))) \Rightarrow (\forall X1. ((\neg \\ & v2_struct_0 X1) \wedge ((v3_orders_2 X1) \wedge ((v4_orders_2 X1) \wedge ((v5_orders_2 \\ & X1) \wedge (l1_orders_2 X1)))) \Rightarrow ((r3_yellow16 X0 X1) \Leftrightarrow (\exists X2. (\\ & (v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X1) (u1_struct_0 \\ & X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & X1) (u1_struct_0 X0)))))) \wedge (r1_yellow16 X0 X1 X2)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge (m1_pre_topc X1 X0)) \Rightarrow (\\ (r1_borsuk_1 X0 X1) \Leftrightarrow (\exists X2.((v1_funct_1 X2) \wedge ((v1_funct_2 \\ X2 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge ((v5_pre_topc X2 X0 X1) \wedge \\ (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 \\ X1)))))) \wedge (v3_borsuk_1 X2 X0 X1)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ (m1_pre_topc X1 X0) \Rightarrow (v2_pre_topc X1)) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge ((v6_pre_topc \\ X0) \wedge (l1_pre_topc X0)))) \Rightarrow (\forall X1.(m1_pre_topc X1 X0) \Rightarrow ((\neg \\ v2_struct_0 X1) \Rightarrow ((\neg v2_struct_0 X1) \wedge (v6_pre_topc X1)))) \end{aligned} \quad (10)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge ((v6_pre_topc \\ X1) \wedge ((v1_waybel25 X1) \wedge (l1_pre_topc X1)))))) \Rightarrow (\forall X2.((\neg \\ v2_struct_0 X2) \wedge (m1_pre_topc X2 X1)) \Rightarrow ((r1_borsuk_1 X1 X2) \Rightarrow (r3_yellow16 \\ (k1_waybel26 X0 X2) (k1_waybel26 X0 X1)))))) \end{aligned}$$