

t32_yellow19 (TMFaVEDi- uxmzHJRH4skuxXGcZYdVqXBkJog)

October 27, 2020

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 $v1_compts_1 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_yellow_1 : \iota \Rightarrow \iota$ be given. Let $k2_struct_0 : \iota \Rightarrow \iota$ be given. Let $v2_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v13_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_waybel_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_waybel_9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_yellow19 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_orders_2 : \iota \Rightarrow o$ be given. Let $v7_waybel_0 : \iota \Rightarrow o$ be given. Let $l1_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_yellow19 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_yellow_6 : \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v6_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_orders_2 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\
& X0))) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge ((v1_subset_1 X1 (u1_struct_0 \\
& (k3_yellow_1 (k2_struct_0 X0)))) \wedge ((v2_waybel_0 X1 (k3_yellow_1 \\
& (k2_struct_0 X0))) \wedge ((v13_waybel_0 X1 (k3_yellow_1 (k2_struct_0 \\
& X0))) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 (k3_yellow_1 \\
& (k2_struct_0 X0)))))))))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\
& X0)) \Rightarrow ((r3_waybel_9 X0 (k3_yellow19 X0 (k2_struct_0 X0) X1) X2) \Leftrightarrow \\
& (r1_waybel_7 X0 X1 X2)))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\
& X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v4_orders_2 X1) \wedge ((v7_waybel_0 \\
& X1) \wedge (l1_waybel_0 X1 X0)))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\
& X0)) \Rightarrow ((r3_waybel_9 X0 X1 X2) \Leftrightarrow (r1_waybel_7 X0 (k2_yellow19 X0 X1) \\
& X2)))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow ((\forall X1.((\neg v2_struct_0 X1) \wedge ((v4_orders_2 X1) \wedge ((\\ v7_waybel_0 X1) \wedge (l1_waybel_0 X1 X0)))) \Rightarrow (\neg(X1 \in k6_yellow_6 X0) \wedge \\ (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\neg r3_waybel_9 \\ X0 X1 X2)))) \Rightarrow (v1_compts_1 X0)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow ((v1_compts_1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v4_orders_2 \\ X1) \wedge ((v7_waybel_0 X1) \wedge (l1_waybel_0 X1 X0)))) \Rightarrow (\exists X2.(m1_subset_1 \\ X2 (u1_struct_0 X0)) \wedge (r3_waybel_9 X0 X1 X2)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge (l1_struct_0 \\ X0)) \wedge (((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ X0))) \wedge ((\neg v1_xboole_0 X2) \wedge ((v1_subset_1 X2 (u1_struct_0 (k3_yellow_1 \\ X1))) \wedge ((v2_waybel_0 X2 (k3_yellow_1 X1)) \wedge ((v13_waybel_0 X2 (\\ k3_yellow_1 X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 (\\ k3_yellow_1 X1)))))))))) \Rightarrow ((\neg v2_struct_0 (k3_yellow19 X0 X1 X2)) \wedge \\ ((v6_waybel_0 (k3_yellow19 X0 X1 X2) X0) \wedge (v7_waybel_0 (k3_yellow19 \\ X0 X1 X2)))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 \\ (k2_struct_0 X0)) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge (l1_struct_0 \\ X0)) \wedge (((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ X0))) \wedge ((\neg v1_xboole_0 X2) \wedge ((v2_waybel_0 X2 (k3_yellow_1 X1)) \wedge \\ ((v13_waybel_0 X2 (k3_yellow_1 X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ (u1_struct_0 (k3_yellow_1 X1)))))))))) \Rightarrow ((\neg v2_struct_0 (k3_yellow19 \\ X0 X1 X2)) \wedge ((v3_orders_2 (k3_yellow19 X0 X1 X2)) \wedge ((v4_orders_2 \\ (k3_yellow19 X0 X1 X2)) \wedge (v6_waybel_0 (k3_yellow19 X0 X1 X2) X0)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \wedge \\ ((\neg v2_struct_0 X1) \wedge ((v4_orders_2 X1) \wedge ((v7_waybel_0 X1) \wedge (l1_waybel_0 \\ X1 X0)))) \Rightarrow ((v1_subset_1 (k2_yellow19 X0 X1) (u1_struct_0 (k3_yellow_1 \\ (k2_struct_0 X0))) \wedge (v2_waybel_0 (k2_yellow19 X0 X1) (k3_yellow_1 \\ (k2_struct_0 X0)))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \wedge \\ & ((\neg v2_struct_0 X1) \wedge (l1_waybel_0 X1 X0))) \Rightarrow ((\neg v1_xboole_0 (k2_yellow19 \\ & X0 X1)) \wedge (v13_waybel_0 (k2_yellow19 X0 X1) (k3_yellow_1 (k2_struct_0 \\ & X0)))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0. (l1_pre_topc X0) \Rightarrow (l1_struct_0 X0) \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge (l1_struct_0 \\ & X0)) \wedge (((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & X0)))) \wedge ((\neg v1_xboole_0 X2) \wedge ((v2_waybel_0 X2 (k3_yellow_1 X1)) \wedge \\ & ((v13_waybel_0 X2 (k3_yellow_1 X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (u1_struct_0 (k3_yellow_1 X1)))))))))) \Rightarrow ((\neg v2_struct_0 (k3_yellow19 \\ & X0 X1 X2)) \wedge ((v6_waybel_0 (k3_yellow19 X0 X1 X2) X0) \wedge (l1_waybel_0 \\ & (k3_yellow19 X0 X1 X2) X0))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \wedge \\ & ((\neg v2_struct_0 X1) \wedge (l1_waybel_0 X1 X0))) \Rightarrow (m1_subset_1 (k2_yellow19 \\ & X0 X1) (k1_zfmisc_1 (u1_struct_0 (k3_yellow_1 (k2_struct_0 X0)))))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0. (l1_struct_0 X0) \Rightarrow (m1_subset_1 (k2_struct_0 X0) (k1_zfmisc_1 (u1_struct_0 X0))) \quad (13)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow ((v1_compts_1 X0) \Leftrightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge ((v1_subset_1 \\ & X1 (u1_struct_0 (k3_yellow_1 (k2_struct_0 X0)))) \wedge ((v2_waybel_0 \\ & X1 (k3_yellow_1 (k2_struct_0 X0))) \wedge ((v13_waybel_0 X1 (k3_yellow_1 \\ & (k2_struct_0 X0))) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & (k3_yellow_1 (k2_struct_0 X0)))))))))) \Rightarrow (\exists X2. (m1_subset_1 \\ & X2 (u1_struct_0 X0)) \wedge (r1_waybel_7 X0 X1 X2))) \end{aligned}$$