

t16_yellow19 (TM-
cuDi4nTPpVEaUBGR1fr7u8u3tcmmkiKWm)

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 $v1_xboole_0 : \iota \Rightarrow o$ 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 $r3_waybel_9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_yellow19 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_waybel_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $k2_yellow19 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v6_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_orders_2 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\forall X1. \\ & ((\neg v1_xboole_0 X1) \wedge ((v1_subset_1 X1 (u1_struct_0 (k3_yellow_1 \\ & (k2_struct_0 X0)))) \wedge ((v2_waybel_0 X1 (k3_yellow_1 (k2_struct_0 \\ & X0))) \wedge ((v13_waybel_0 X1 (k3_yellow_1 (k2_struct_0 X0))) \wedge (m1_subset_1 \\ & X1 (k1_zfmisc_1 (u1_struct_0 (k3_yellow_1 (k2_struct_0 X0)))))))))) \Rightarrow \\ & (X1 = k2_yellow19 X0 (k3_yellow19 X0 (k2_struct_0 X0) X1))) \end{aligned} \tag{1}$$

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.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge(l1_struct_0 \\ & X0))\wedge(((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & X0))))\wedge((\neg v1_xboole_0 X2)\wedge((v1_subset_1 X2 (u1_struct_0 (k3_yellow_1 \\ & X1))\wedge((v2_waybel_0 X2 (k3_yellow_1 X1))\wedge((v13_waybel_0 X2 (\\ & k3_yellow_1 X1))\wedge(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 (\\ & k3_yellow_1 X1))))))))))\Rightarrow((\neg v2_struct_0 (k3_yellow19 X0 X1 X2))\wedge \\ & ((v6_waybel_0 (k3_yellow19 X0 X1 X2) X0)\wedge(v7_waybel_0 (k3_yellow19 \\ & X0 X1 X2)))) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l1_struct_0 X0))\Rightarrow(\neg v1_xboole_0 (k2_struct_0 X0)) \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge(l1_struct_0 \\ & X0))\wedge(((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & X0))))\wedge((\neg v1_xboole_0 X2)\wedge((v2_waybel_0 X2 (k3_yellow_1 X1))\wedge \\ & ((v13_waybel_0 X2 (k3_yellow_1 X1))\wedge(m1_subset_1 X2 (k1_zfmisc_1 \\ & (u1_struct_0 (k3_yellow_1 X1))))))))))\Rightarrow((\neg v2_struct_0 (k3_yellow19 \\ & X0 X1 X2))\wedge((v3_orders_2 (k3_yellow19 X0 X1 X2))\wedge((v4_orders_2 \\ & (k3_yellow19 X0 X1 X2))\wedge(v6_waybel_0 (k3_yellow19 X0 X1 X2) X0)))) \end{aligned} \tag{5}$$

Assume the following.

$$\forall X0.(l1_pre_topc X0)\Rightarrow(l1_struct_0 X0) \tag{6}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge(l1_struct_0 \\ & X0))\wedge(((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & X0))))\wedge((\neg v1_xboole_0 X2)\wedge((v2_waybel_0 X2 (k3_yellow_1 X1))\wedge \\ & ((v13_waybel_0 X2 (k3_yellow_1 X1))\wedge(m1_subset_1 X2 (k1_zfmisc_1 \\ & (u1_struct_0 (k3_yellow_1 X1))))))))))\Rightarrow((\neg v2_struct_0 (k3_yellow19 \\ & X0 X1 X2))\wedge((v6_waybel_0 (k3_yellow19 X0 X1 X2) X0)\wedge(l1_waybel_0 \\ & (k3_yellow19 X0 X1 X2) X0))) \end{aligned} \tag{7}$$

Assume the following.

$$\forall X0.(l1_struct_0 X0)\Rightarrow(m1_subset_1 (k2_struct_0 X0) (k1_zfmisc_1 (u1_struct_0 X0))) \tag{8}$$

Theorem 1

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