

t1_waybel_4

(TMWF1MVfSynspzKjJmpExBesadUuSDHnbZF)

October 27, 2020

Let $v3_orders_2 : \iota \Rightarrow o$ be given. Let $v4_orders_2 : \iota \Rightarrow o$ be given. Let $v5_orders_2 : \iota \Rightarrow o$ be given. Let $v1_yellow_0 : \iota \Rightarrow o$ be given. Let $v1_lattice3 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v2_waybel_4 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_waybel_4 : \iota \Rightarrow \iota \Rightarrow o$ 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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge (l1_orders_2 \\
 & X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
 & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\
 & (u1_struct_0 X0)) \Rightarrow ((X3 = k13_lattice3 X0 X1 X2) \Leftrightarrow ((r1_orders_2 \\
 & X0 X1 X3) \wedge ((r1_orders_2 X0 X2 X3) \wedge (\forall X4.(m1_subset_1 X4 (\\
 & u1_struct_0 X0)) \Rightarrow (((r1_orders_2 X0 X1 X4) \wedge (r1_orders_2 X0 X2 X4)) \Rightarrow \\
 & (r1_orders_2 X0 X3 X4))))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge \\
 & ((\neg v1_xboole_0 X1) \wedge ((m1_subset_1 X2 X0) \wedge (m1_subset_1 X3 X1)))) \Rightarrow \\
 & (k1_domain_1 X0 X1 X2 X3 = k4_tarski X2 X3)
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. (((v5_orders_2 X0) \wedge ((v1_lattice3 \\
 & X0) \wedge (l1_orders_2 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\\
 & m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow (k13_lattice3 X0 X1 X2 = k10_lattice3 \\
 & X0 X1 X2)
 \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \quad (4)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (l1_struct_0 X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge (l1_orders_2 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow (m1_subset_1 (k13_lattice3 X0 X1 X2) (u1_struct_0 X0)) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 \\ X0)))) \Rightarrow ((v3_waybel_4 X1 X0) \Leftrightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4. \\ (m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (((k1_domain_1 (u1_struct_0 \\ X0) (u1_struct_0 X0) X2 X4 \in X1) \wedge (k1_domain_1 (u1_struct_0 X0) (\\ u1_struct_0 X0) X3 X4 \in X1)) \Rightarrow (k1_domain_1 (u1_struct_0 X0) (u1_struct_0 \\ X0) (k10_lattice3 X0 X2 X3) X4 \in X1)))))))) \quad (7) \end{aligned}$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)))) \Rightarrow ((v2_waybel_4 \\ X1 X0) \Leftrightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\ (u1_struct_0 X0)) \Rightarrow (\forall X5.(m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow \\ (((r1_orders_2 X0 X5 X2) \wedge ((k4_tarski X2 X3 \in X1) \wedge (r1_orders_2 X0 \\ X3 X4)) \Rightarrow (k4_tarski X5 X4 \in X1)))))))) \quad (8) \end{aligned}$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v1_lattice3 X0) \Rightarrow (\neg v2_struct_0 X0)) \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v1_yellow_0 X0) \wedge ((v1_lattice3 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow \\ & (\forall X1.((v2_waybel_4 X1 X0) \wedge ((v3_waybel_4 X1 X0) \wedge (m1_subset_1 \\ & X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)))))) \Rightarrow \\ & (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 \\ & X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X5.(m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (((k1_domain_1 \\ & (u1_struct_0 X0) (u1_struct_0 X0) X2 X4 \in X1) \wedge (k1_domain_1 (u1_struct_0 \\ & X0) (u1_struct_0 X0) X3 X5 \in X1)) \Rightarrow (k1_domain_1 (u1_struct_0 X0) \\ & (u1_struct_0 X0) (k13_lattice3 X0 X2 X3) (k13_lattice3 X0 X4 X5) \in \\ & X1)))))))))) \end{aligned}$$