

t52_yellow_0

(TMd43Z1m1sY37UHZRTyRhds6fFUyZXeqm6R)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $r2_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_yellow_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & \forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (((r2_lattice3 \\ & X0 X1 X2) \Rightarrow (r2_lattice3 X0 (k3_xboole_0 X1 (u1_struct_0 X0)) X2)) \wedge \\ & (((r2_lattice3 X0 (k3_xboole_0 X1 (u1_struct_0 X0)) X2) \Rightarrow (r2_lattice3 \\ & X0 X1 X2)) \wedge ((r1_lattice3 X0 X1 X2) \Rightarrow (r1_lattice3 X0 (k3_xboole_0 \\ & X1 (u1_struct_0 X0)) X2)) \wedge ((r1_lattice3 X0 (k3_xboole_0 X1 (u1_struct_0 \\ & X0)) X2) \Rightarrow (r1_lattice3 X0 X1 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & \forall X2. ((r2_yellow_0 X0 X1) \wedge (\forall X3. (m1_subset_1 X3 (\\ & u1_struct_0 X0)) \Rightarrow ((r1_lattice3 X0 X1 X3) \Leftrightarrow (r1_lattice3 X0 X2 X3)))) \Rightarrow \\ & (k2_yellow_0 X0 X1 = k2_yellow_0 X0 X2)) \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & ((r2_yellow_0 X0 X1) \vee (r2_yellow_0 X0 (k3_xboole_0 X1 (u1_struct_0 \\ & X0)))) \Rightarrow (k2_yellow_0 X0 X1 = k2_yellow_0 X0 (k3_xboole_0 X1 (u1_struct_0 \\ & X0)))) \end{aligned}$$