

t6_latsum_1 (TMLjH-
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October 27, 2020

Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_orders_2 : \iota \Rightarrow \iota$ be given. Let $k1_latsum_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_orders_2 : \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_reset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. ((l1_orders_2 X0) \wedge (l1_orders_2 X1)) \Rightarrow (v1_orders_2 (k1_latsum_1 X0 X1)) \wedge (l1_orders_2 (k1_latsum_1 X0 X1)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (X2 = k2_xboole_0 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in X0) \vee (X3 \in X1))) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1_orders_2 X0) \Rightarrow (\forall X1. (l1_orders_2 X1) \Rightarrow (\forall X2. \\ & ((v1_orders_2 X2) \wedge (l1_orders_2 X2)) \Rightarrow ((X2 = k1_latsum_1 X0 X1) \Leftrightarrow \\ & ((u1_struct_0 X2 = k2_xboole_0 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge \\ & (u1_orders_2 X2 = k2_xboole_0 (k2_xboole_0 (u1_orders_2 X0) (u1_orders_2 \\ & X1)) (k4_reset_1 (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 \\ & X1) (u1_struct_0 X1) (u1_orders_2 X0) (u1_orders_2 X1)))))) \quad (3) \end{aligned}$$

Theorem 1

$$\begin{aligned} & \forall X0. (l1_orders_2 X0) \Rightarrow (\forall X1. (l1_orders_2 X1) \Rightarrow (\forall X2. \\ & \forall X3. ((k4_tarski X2 X3 \in u1_orders_2 X0) \Rightarrow (k4_tarski X2 X3 \in \\ & u1_orders_2 (k1_latsum_1 X0 X1))) \wedge ((k4_tarski X2 X3 \in u1_orders_2 \\ & X1) \Rightarrow (k4_tarski X2 X3 \in u1_orders_2 (k1_latsum_1 X0 X1)))) \end{aligned}$$