

t5_substlat (TMHShcBvZPUdYhNaBDfpZmFX- CkoZFXZL6DP)

October 27, 2020

Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_finsub_1 : \iota \Rightarrow \iota$ be given. Let $k4_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_substlat : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k5_finsub_1 X0)) \Rightarrow (\forall X2. (X2 \in X1) \Rightarrow (m1_subset_1 X2 X0))) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \neg v1_xboole_0 (k4_partfun1 X0 X1) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. k1_substlat X0 X1 = ReplSep (toset (\lambda X2 : \\ \iota. m1_subset_1 X2 (k5_finsub_1 (k4_partfun1 X0 X1)))) (\lambda X2 : \\ \iota. (\forall X3. (X3 \in X2) \Rightarrow (v1_finset_1 X3)) \wedge (\forall X3. (m1_subset_1 \\ X3 (k4_partfun1 X0 X1)) \Rightarrow (\forall X4. (m1_subset_1 X4 (k4_partfun1 \\ X0 X1)) \Rightarrow (((X3 \in X2) \wedge ((X4 \in X2) \wedge (r1_tarski X3 X4))) \Rightarrow (X3 = X4)))))) \\ (\lambda X2 : \iota. X2) \end{aligned} \quad (3)$$

Theorem 1

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k5_finsub_1 (k4_partfun1 X0 X1))) \Rightarrow (\forall X3. \forall X4. ((X2 \in k1_substlat X0 X1) \wedge ((X3 \in X2) \wedge ((X4 \in X2) \wedge (r1_tarski X3 X4)))) \Rightarrow (X3 = X4))$$