

t6_substlat

(TMZM6boJmKdZJuMRJzRFZfCqJnUzQxa9Bos)

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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 $k3_substlat : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k5_finsub_1 \\ & (k4_partfun1 X0 X1))) \Rightarrow (k3_substlat X0 X1 X2 = ReplSep (toset (\lambda X3 : \\ & \iota. m1_subset_1 X3 (k4_partfun1 X0 X1))) (\lambda X3 : \iota. (v1_finset_1 \\ & X3) \wedge (\forall X4. (m1_subset_1 X4 (k4_partfun1 X0 X1)) \Rightarrow ((X4 \in X2) \wedge \\ & (r1_tarski X4 X3)) \Leftrightarrow (X4 = X3)))) (\lambda X3 : \iota. X3)) \end{aligned} \quad (3)$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k5_finsub_1 \\ & (k4_partfun1 X0 X1))) \Rightarrow (\forall X3. (X3 \in k3_substlat X0 X1 X2) \Rightarrow (\\ & (X3 \in X2) \wedge (\forall X4. ((X4 \in X2) \wedge (r1_tarski X4 X3)) \Rightarrow (X4 = X3)))) \end{aligned}$$