

t20_substlat

(TMYP33k3nBWor9JdY2BkQDtsK8SwcArJNmR)

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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 $k4_substlat : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v4_finsub_1 : \iota \Rightarrow o$ be given. Let $k1_substlat : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k5_finsub_1 \\ & (k4_partfun1 X0 X1))) \Rightarrow (\forall X3. (m1_subset_1 X3 (k5_finsub_1 \\ & (k4_partfun1 X0 X1))) \Rightarrow (k4_substlat X0 X1 X2 X3 = k4_substlat X0 X1 \\ & X3 X2)) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k5_finsub_1 \\ & (k4_partfun1 X0 X1))) \Rightarrow (\forall X3. (m1_subset_1 X3 (k5_finsub_1 \\ & (k4_partfun1 X0 X1))) \Rightarrow (k3_substlat X0 X1 (k4_substlat X0 X1 (k3_substlat \\ & X0 X1 X2) X3) = k3_substlat X0 X1 (k4_substlat X0 X1 X2 X3))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. (\neg v1_xboole_0 (k5_finsub_1 X0)) \wedge (v4_finsub_1 (k5_finsub_1 X0)) \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. \neg v1_xboole_0 (k1_substlat X0 X1) \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ & X2 X0 X1) \Rightarrow (m1_subset_1 X2 X0)) \end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k5_finsub_1 \\ & (k4_partfun1 X0 X1))) \Rightarrow (m2_subset_1 (k3_substlat X0 X1 X2) (k5_finsub_1 \\ & (k4_partfun1 X0 X1)) (k1_substlat X0 X1)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.m1_subset_1 (k1_substlat X0 X1) (k1_zfmisc_1 \\ & (k5_finsub_1 (k4_partfun1 X0 X1))) \end{aligned} \quad (7)$$

Theorem 1

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k5_finsub_1 \\ & (k4_partfun1 X0 X1))) \Rightarrow (\forall X3.(m1_subset_1 X3 (k5_finsub_1 \\ & (k4_partfun1 X0 X1))) \Rightarrow (k3_substlat X0 X1 (k4_substlat X0 X1 X2 (\\ & k3_substlat X0 X1 X3)) = k3_substlat X0 X1 (k4_substlat X0 X1 X2 X3))) \end{aligned}$$