

t24_substlat
(TMSZvM5hAL7Hzh7rc4nxC9pG1n65jsL9ThV)

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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 $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v4_finsub_1 : \iota \Rightarrow o$ be given. Let $k1_finsub_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k5_finsub_1 (k4_partfun1 X0 X1))) \Rightarrow (r1_tarski X2 (k4_substlat X0 X1 X2 X2)) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski X0 X1) \Rightarrow (k2_xboole_0 X0 X1 = X1) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v1_xboole_0 X0) \wedge (v4_finsub_1 X0)) \wedge ((m1_subset_1 X1 X0) \wedge (m1_subset_1 X2 X0))) \Rightarrow (k1_finsub_1 X0 X1 X2 = k2_xboole_0 X1 X2) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k5_finsub_1 (k4_partfun1 X0 X1))) \Rightarrow (\forall X3.(m1_subset_1 X3 (k5_finsub_1 (k4_partfun1 X0 X1))) \Rightarrow (k3_substlat X0 X1 (k1_finsub_1 (k5_finsub_1 (k4_partfun1 X0 X1)) (k4_substlat X0 X1 X2 X3) X3) = k3_substlat X0 X1 X3)) \quad (4)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 (k5_finsub_1 X0)) \wedge (v4_finsub_1 (k5_finsub_1 X0)) \quad (5)$$

Assume the following.

$$\forall X0.v4_finsub_1 (k5_finsub_1 X0) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1 X2 \\ & (k5_finsub_1 (k4_partfun1 X0 X1)))\wedge(m1_subset_1 X3 (k5_finsub_1 \\ & (k4_partfun1 X0 X1))))\Rightarrow(m1_subset_1 (k4_substlat X0 X1 X2 X3) (\\ & k5_finsub_1 (k4_partfun1 X0 X1))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.k2_xboole_0 X0 X1 = k2_xboole_0 X1 X0 \quad (8)$$

Theorem 1

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