

t10\_substlat (TM-  
cEAZiD1Nnv6Q8B3S7WQkmi6umZDiGBjRB)

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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  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $r1\_tarSKI : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_substlat : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v4\_finsub\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k5\_finsub\_1 \\ & (k4\_partfun1 X0 X1))) \Rightarrow (\forall X3. (v1\_finset\_1 X3) \Rightarrow (((X3 \in X2) \wedge \\ & (\forall X4. (v1\_finset\_1 X4) \Rightarrow (((X4 \in X2) \wedge (r1\_tarSKI X4 X3)) \Rightarrow ( \\ & X4 = X3)))))) \Rightarrow (X3 \in k3\_substlat X0 X1 X2))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X2))) \Rightarrow (m1\_subset\_1 X0 X2) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 (k1\_zfmisc\_1 X1)) \Leftrightarrow (r1\_tarSKI X0 X1) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1\_tarSKI X0 X1) \wedge (r1\_tarSKI X1 X2)) \Rightarrow (r1\_tarSKI X0 X2) \quad (5)$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1 : \iota \Rightarrow \iota \Rightarrow o. \forall X2. ((\forall X3. \\
& (m1\_subset\_1 X3 X2) \Rightarrow (X1 X3 X3)) \wedge (\forall X3. (m1\_subset\_1 X3 X2) \Rightarrow \\
& (\forall X4. (m1\_subset\_1 X4 X2) \Rightarrow (\forall X5. (m1\_subset\_1 X5 X2) \Rightarrow \\
& (((X1 X3 X4) \wedge (X1 X4 X5)) \Rightarrow (X1 X3 X5)))))) \Rightarrow (\forall X3. (m1\_subset\_1 \\
& X3 X2) \Rightarrow (\neg(X3 \in X0) \wedge (\forall X4. (m1\_subset\_1 X4 X2) \Rightarrow (\neg(X4 \in X0) \wedge \\
& ((X1 X4 X3) \wedge (\forall X5. (m1\_subset\_1 X5 X2) \Rightarrow (((X5 \in X0) \wedge (X1 X5 X4)) \Rightarrow \\
& (X1 X4 X5))))))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\forall X0. \forall X1. r1\_tarski X0 X0 \tag{7}$$

Assume the following.

$$\forall X0. (\neg v1\_xboole\_0 (k5\_finsub\_1 X0)) \wedge (v4\_finsub\_1 (k5\_finsub\_1 X0)) \tag{8}$$

Assume the following.

$$\forall X0. v4\_finsub\_1 (k5\_finsub\_1 X0) \tag{9}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. (v4\_finsub\_1 X1) \Rightarrow ((X1 = k5\_finsub\_1 X0) \Leftrightarrow \\
& (\forall X2. (X2 \in X1) \Leftrightarrow ((r1\_tarski X2 X0) \wedge (v1\_finset\_1 X2))))
\end{aligned} \tag{10}$$

Assume the following.

$$\forall X0. \forall X1. (X0 = X1) \Leftrightarrow ((r1\_tarski X0 X1) \wedge (r1\_tarski X1 X0)) \tag{11}$$

Assume the following.

$$\forall X0. (v1\_finset\_1 X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow (v1\_finset\_1 X1)) \tag{12}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k5\_finsub\_1 \\
& (k4\_partfun1 X0 X1))) \Rightarrow (\forall X3. (v1\_finset\_1 X3) \Rightarrow (\neg(X3 \in X2) \wedge \\
& (\forall X4. \neg(r1\_tarski X4 X3) \wedge (X4 \in k3\_substlat X0 X1 X2))))
\end{aligned}$$