

t37_subset_1
(TMJFQ5dF4QH9uPpAVc1NhpqtangvwzqmNPE)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k3_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\forall X0.\neg v1_xboole_0 (k1_zfmisc_1 X0) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski X0 X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & (X5 = k3_enumset1 X0 X1 X2 X3 X4) \Leftrightarrow (\forall X6.(X6 \in X5) \Leftrightarrow (\neg(X6 \neq X0) \wedge \\ & ((X6 \neq X1) \wedge ((X6 \neq X2) \wedge ((X6 \neq X3) \wedge (X6 \neq X4)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1_zfmisc_1 X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (r1_tarski X2 X0)) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1_xboole_0 X0) \Rightarrow ((m1_subset_1 X1 X0) \Leftrightarrow \\ & (X1 \in X0))) \wedge ((v1_xboole_0 X0) \Rightarrow ((m1_subset_1 X1 X0) \Leftrightarrow (v1_xboole_0 \\ & X1))) \end{aligned} \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0.\forall X1.(m1_subset_1 X1 X0) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 X0) \Rightarrow (\forall X3.(m1_subset_1 X3 X0) \Rightarrow (\forall X4.(m1_subset_1 \\ & X4 X0) \Rightarrow (\forall X5.(m1_subset_1 X5 X0) \Rightarrow ((X0 \neq k1_xboole_0) \Rightarrow (m1_subset_1 \\ & (k3_enumset1 X1 X2 X3 X4 X5) (k1_zfmisc_1 X0))))))) \end{aligned}$$