

t10_domain_1
(TMKj7EBNjHDep6FM1eksmBbSwFqS96YyYbu)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k4_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_xtuple_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. \\ & \forall X6. \forall X7. (k6_xtuple_0 X0 X1 X2 X3 \in k4_zfmisc_1 X4 X5 \\ & X6 X7) \Leftrightarrow ((X0 \in X4) \wedge ((X1 \in X5) \wedge ((X2 \in X6) \wedge (X3 \in X7)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \neg (X0 \in \\ & k4_zfmisc_1 X1 X2 X3 X4) \wedge (\forall X5. \forall X6. \forall X7. \forall X8. \\ & \neg (X5 \in X1) \wedge ((X6 \in X2) \wedge ((X7 \in X3) \wedge ((X8 \in X4) \wedge (X0 = k6_xtuple_0 X5 X6 \\ & X7 X8)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. (\neg v1_xboole_0 X1) \Rightarrow (\forall X2. (\neg v1_xboole_0 \\ & X2) \Rightarrow (\forall X3. (\neg v1_xboole_0 X3) \Rightarrow (\forall X4. (\neg v1_xboole_0 \\ & X4) \Rightarrow ((X0 \in k4_zfmisc_1 X1 X2 X3 X4) \Leftrightarrow (\exists X5. (m1_subset_1 X5 \\ & X1) \wedge (\exists X6. (m1_subset_1 X6 X2) \wedge (\exists X7. (m1_subset_1 \\ & X7 X3) \wedge (\exists X8. (m1_subset_1 X8 X4) \wedge (X0 = k6_xtuple_0 X5 X6 X7 \\ & X8)))))))))) \end{aligned}$$