

t12_domain_1

(TMcWA9G4WrzHArwLoPkeXoEr4CjoK9i2Lc8)

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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.

$$\forall X0. \forall X1. \neg(X0 \in X1) \wedge (v1_xboole_0 X1) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (\neg v1_xboole_0 X1) \Rightarrow \\ & (\forall X2. (\neg v1_xboole_0 X2) \Rightarrow (\forall X3. (\neg v1_xboole_0 X3) \Rightarrow \\ & (\forall X4. (\neg v1_xboole_0 X4) \Rightarrow ((\forall X5. (X5 \in X0) \Leftrightarrow (\exists X6. \\ & (m1_subset_1 X6 X1) \wedge (\exists X7. (m1_subset_1 X7 X2) \wedge (\exists X8. \\ & (m1_subset_1 X8 X3) \wedge (\exists X9. (m1_subset_1 X9 X4) \wedge (X5 = k6_xtuple_0 \\ & X6 X7 X8 X9)))))) \Rightarrow (X0 = k4_zfmisc_1 X1 X2 X3 X4)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (\neg v1_xboole_0 X1) \Rightarrow (\forall X2. (\neg v1_xboole_0 \\ & X2) \Rightarrow (\forall X3. (\neg v1_xboole_0 X3) \Rightarrow (\forall X4. (\neg v1_xboole_0 \\ & X4) \Rightarrow ((X0 \in k4_zfmisc_1 X1 X2 X3 X4) \Leftrightarrow (\exists X5. (m1_subset_1 X5 \\ & X1) \wedge (\exists X6. (m1_subset_1 X6 X2) \wedge (\exists X7. (m1_subset_1 \\ & X7 X3) \wedge (\exists X8. (m1_subset_1 X8 X4) \wedge (X0 = k6_xtuple_0 X5 X6 X7 \\ & X8)))))))))) \end{aligned} \quad (3)$$

Theorem 1

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (\neg v1_xboole_0 X1) \Rightarrow \\ & (\forall X2. (\neg v1_xboole_0 X2) \Rightarrow (\forall X3. (\neg v1_xboole_0 X3) \Rightarrow \\ & (\forall X4. (\neg v1_xboole_0 X4) \Rightarrow ((X0 = k4_zfmisc_1 X1 X2 X3 X4) \Leftrightarrow (\\ & \forall X5. (X5 \in X0) \Leftrightarrow (\exists X6. (m1_subset_1 X6 X1) \wedge (\exists X7. \\ & (m1_subset_1 X7 X2) \wedge (\exists X8. (m1_subset_1 X8 X3) \wedge (\exists X9. \\ & (m1_subset_1 X9 X4) \wedge (X5 = k6_xtuple_0 X6 X7 X8 X9)))))))))) \end{aligned}$$